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The intent of this study was to determine the proportionate number of U.S. Army retirees, retiree family members and active duty family members living within the CHAMPUS catchment area of MACH who were seeking healthcare from private sources. Although this was accomplished, practical application of the results obtained was significantly restricted by limitations in the design of the survey instruments. Demographic data obtained from the survey, however, was considered valid and allowed several useful conclusions about the study population to be drawn. In addition, an extensive analysis of the mistakes made in the survey instrument design, which in turn led to the limitations of the study results, was presented in the conclusion of the study to assist future research efforts in this area.

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A STUDY TO DETERMINE THE PROPORTIONATE NUMBER OF

U.S. ARMY RETIREES, RETIREE FAMILY MEMBERS, AND

ACTIVE DUTY FAMILY MEMBERS LIVING WITHIN THE CHAMPUS

CATCHMENT AREA OF MARTIN ARMY COMMUNITY HOSPITAL

WHO ARE CURRENTLY SEEKING HEALTHCARE FROM PRIVATE SOURCES

A Graduate Research Project

Submitted to the Faculty of

Baylor University

In partial Fulfillment of the

Requirements for the Degree

of

Master of Health Administration

By

Major Robert T. Foster, MS

11 July 1988

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CHAPTER I

INTRODUCTION

Background to the Research Effort

On October 1, 1987, Fiscal Year 1988 began for the Department of Defense (DOD). That same day the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) already had a deficit of nearly $115 million (Newhall 1987, 2).

This situation was the result of a decision by the Assistant Secretary of Defense for Health Affairs, Dr. William E. Mayer, to suspend payment of CHAMPUS bills on September 4, 1987, due to a shortage of funds. Dr. Mayer decided to defer payment of claims until the new fiscal year primarily because Congress had already bailed out the CHAMPUS program with a $425 million supplemental appropriations bill in June 1987. Dr. Mayer felt it was unlikely that Congress would approve a second reprogramming request in the same year. Thus, $115 million of the $525 million total CHAMPUS shortfall was passed to the new fiscal year (Newhall 1987, 2, 16).

CHAMPUS was created by the U.S. Congress in 1964 as a medical benefits program for the family members of active duty soldiers. The program was designed to cost-share charges for medically necessary services and supplies when they were not available from military medical treatment facilities. In 1967, retirees of the Armed Services, their dependents, and dependent

survivors of retirees were also added to the CHAMPUS program (CHAMPUS Confe: ﹣ce Manual 1987, I-3).

Like other social programs established during the more liberal 'Great Society' years of the mid-60s, the cost of the CHAMPUS program soon grew beyond even the most extravagant expectations of its founders. This was especially true in this decade which saw a growth in CHAMPUS costs from #804 million in 1981 (Baldwin 1987, 168) to over #2 billion in 1987 (Newhall 1987, 2). Between 1983 and 1986 alone, CHAMPUS costs increased at a rate 50% faster than the total cost of healthcare in the United States (Baldwin 1987, 168).

Although the growth in CHAMPUS costs can be attributed to many factors, one with great significance has been the tremendous growth in the number of beneficiaries seeking healthcare from the military direct care system. For example, in 1960 the DOD counted 255,089 retired military personnel; however, by 1986, that number had soared to 1,390,481, according to DOD's 1986 military retirement report. At the same time, a general increase in longevity resulted in retirees living longer and therefore demanding more care from the direct care system (Burke 1987, 2). Adding to this problem was the number of active duty soldiers with families, which also increased significantly, primarily as a result of the all-volunteer force ('Cost, Access Pose Problems' 1987, 6). The net result of this growth was the creation of demand far beyond capacity of the direct care system, which forced ever increasing numbers of beneficiaries to

use CHAMPUS for their healthcare needs and, thus, drove the total CHAMPUS costs upward.

A second factor bearing on CHAMPUS costs has been the affect which the general state of the economy has had on where beneficiaries obtain healthcare. In 1982, for example, unemployment in the United States rose by 2%, stripping those beneficiaries affected of their private insurance coverage. As a result, a number of beneficiaries who had not previously used their military benefits turned to CHAMPUS. Many of them continued to utilize CHAMPUS even after their economic status improved, perhaps because rising healthcare premiums and coinsurance rates in private health insurance made other coverage too costly ("CHAMPUS Reform Plan 'Risky'" 1987, 17).

A third factor includes the shortage of professional and ancillary personnel, supplies, equipment and funding experienced by all three military medical departments during the 1980s. Particularly devastating to the direct care system has been the loss of capacity resulting from the inability to retain professional staff in the services, a steady decline in support staff which has forced physicians to perform clerical duties wasteful of their expertise, and accountability programs that are very demanding of physicians' time ("White Paper Warns Against 'Neglect' of Military GME" 1987, 8). The impact of these shortages and abuses has been to reduce the availability of care despite the increasing demand by retirees and active duty family members. As a result, more beneficiaries have turned to CHAMPUS

for their healthcare, which, according to Dr. Mayer, produced major increases in CHAMPUS costs. For example, in Fiscal Year 1987 a 1% decrease in direct care admissions was correlated with a 3% increase in CHAMPUS workload, and a 1% decrease in outpatient visits was correlated with a 6% increase in CHAMPUS workload (Newhall 1987, 16). The net result of these combined factors placed demands on the direct care system which far exceeded its capacity, forced increasing numbers of beneficiaries to use CHAMPUS for their healthcare needs, thus, driving total CHAMPUS costs upward.

In response to these concerns, as well as to charges of other serious problems, such as inadequate quality assurance and complex procedures for filing claims (Tomich 1986, 11), in the fall of 1985, Dr. Mayer suggested a massive reform of the CHAMPUS program. At that time, he spoke of a single nationwide contract that would remove the burden of administering the program from DOD. The idea was to use DOD's tremendous buying power to secure enhanced benefits for military family members and retirees, and to end the practice of simply paying billed charges (Tomich 1987, 55).

This CHAMPUS reform effort, later to be called the 'CHAMPUS Reform Initiative,' became embroiled in controversy almost from the start. First, negative publicity was generated about the plan by a critical General Accounting Office report. Further uncertainty was created by congressional actions, such as passage of an amendment which required revision of the published

Request For Proposals and the requirement for demonstration test projects (Baldwin, 1987, 165). The controversy all but eliminated the initiative and resulted in a contract being awarded in only one region, rather than in four regions as was originally proposed.

Still faced with the same problems, Dr. Mayer announced a new CHAMPUS reform in the late summer of 1987. The new initiative, called `Project Restore,` was designed to bring more of the CHAMPUS workload into military hospitals. Among other things, Project Restore placed financial responsibility for CHAMPUS costs in the military medical departments, as required by the 1988 Defense Department budget submission and congressional direction (`Cost, Access Pose Problems` 1987, 1, 6).

In October 1987, the DOD transferred responsibility for the management of CHAMPUS funds to the respective services (Information Paper 1987, 1). At the same time, Dr. Mayer directed the services to develop CHAMPUS catchment area management demonstration projects. Under this concept, CHAMPUS funds will be turned over to local medical treatment facilities, which will be charged with the responsibility for all healthcare of catchment area beneficiaries, regardless of whether they receive care in the civilian community or the military hospital. Dr. Mayer stated that this program will allow the DOD to manage care purchased from civilian healthcare providers and care performed by military providers in a predictable, intelligent, and economical fashion (Newhall 1987, 16).

Conditions Which Prompted the Study

In the fall of 1987, the Commander of Martin Army Community Hospital (MACH) expressed a desire to establish a CHAMPUS demonstration project as a response to Project Restore. It was proposed that the demonstration project take place in the region designated as MACH's CHAMPUS inpatient catchment area by the 1987 Catchment Area Directory, U.S. Inpatient, which was published by the Defense Medical Information System. The directory at that time defined catchment areas for 131 military inpatient medical treatment facilities, one for Fort Drum, and eight for other Uniformed Service Treatment facilities located in the United States. Each catchment area was described as a set of five-digit zip codes which have centers within 40 miles of the center of the zip code of the facility (Defense Medical Information System 1987, iii). In the case of Martin Army Community Hospital, the CHAMPUS catchment area contained in the directory was defined by 47 zip codes within the state of Georgia, and an additional 29 zip codes within the state of Alabama (Defense Medical Information System 1987, GA4). A copy of the 1987 directory listing for Martin Army Community Hospital is attached at Appendix A.

The Commander believed that substantial CHAMPUS cost reductions could be achieved by establishing Family Practice, OB/GYN, or other preferred provider networks in selected areas of the hospital's CHAMPUS catchment area. Areas targeted would be those where significant numbers of retirees, retiree family

members, or active duty family members are utilizing CHAMPUS instead of MACH to meet their healthcare needs (Segal 1988, personal interview).

To successfully complete the proposed demonstration project, it was determined that three vital items of information needed to be ascertained: first, an estimate of the total number of retirees, retiree family members, and active duty family members permanently residing within each of the zip code locations that make up the CHAMPUS inpatient catchment area of MACH had to be determined; second, the source where retirees, retiree family members, and active duty family members were seeking inpatient and outpatient healthcare from (i.e., MACH, private hospitals and physicians, or other sources) had to be determined; and third, the method of payment that retirees, retiree family members, and active duty family members were using (i.e., personal money without reimbursement, CHAMPUS, Medicare or private health insurance) for healthcare received outside of MACH had to be determined. This data could then be utilized as a base for resource allocation decisions related to the demonstration project, as well as serve as a benchmark against which to measure the success of recapturing CHAMPUS workload for MACH. At the same time it was felt that other useful management information, such as the number of beneficiaries not registered on the Defense Enrollment Eligibility Reporting System (DEERS), an estimate of the number of beneficiaries carrying supplemental or comprehensive private health insurance, and an estimate of the

number of beneficiaries not utilizing their medical entitlement (i.e., the 'ghost population'), could be obtained.

Problem Statement

To determine the proportionate number of U.S. Army retirees, retiree family members, and active duty family members living within the CHAMPUS catchment area of Martin Army Community Hospital who are currently seeking healthcare from private sources.

Objectives

1. To conduct a literature review of survey techniques and instrument design.

2. To develop a questionnaire for surveying active duty soldiers regarding the utilization of private healthcare sources by their family members.

3. To obtain from the Standard Installation/Division Personnel System (SIDPERS) database, a list of all permanent party soldiers, arrayed by unit, that have one or more dependents.

4. To administer the questionnaire to a random sample consisting of 10% of the permanent party soldiers on Fort Benning identified as having one or more dependents listed on the SIDPERS database.

5. To develop a questionnaire for surveying retirees regarding the utilization of private healthcare sources by themselves and their family members.

6. To obtain from the Retired Services Office, Fort Benning, Georgia, a copy of the "Retired Army Personnel Roster-By Zip Code," which contains the addresses, arrayed by zip code, of all U.S. Army retirees and widows within the CHAMPUS catchment area of MACH.

7. To draw a random sample of retirees from the population contained within the CHAMPUS catchment area of MACH.

8. To administer the two respective questionnaires to the randomly selected sample populations.

9. To conduct an analysis of the completed questionnaires.

Criteria

1. The size of the random samples selected from the retiree population and active duty population will be approximately 10% of the total residing in the CHAMPUS catchment area of MACH, for each zip code area (Finstuen 1988, telephonic interview).

2. The desired response rate for the questionnaires used to survey each sample is 60% (Finstuen 1988, telephonic interview); however, statistically significant inferences may still be drawn from the results of the survey even if the overall response rate is lower.

Assumptions

1. The responses of beneficiaries with high family incomes will significantly differ from the responses of beneficiaries with low family incomes. This assumption is based upon several factors. First, while healthcare statistics that compare demand

and income are not plentiful, those which are available seem to support the conclusion that demand for healthcare increases with an increase in income. For example, statistics gathered by the Department of Health and Human Services for the years 1964, 1975, and 1980 in the areas of dental visits, physician visits, and discharge days from hospitals consistently support this conclusion (United States 1982. 90-94). Second, accessing the military direct care system is a well documented problem, especially for retirees and their family members (Mayer 1987, 17). Thus, it is reasonable to assume that if all other variables were constant, the mere fact that one family has more income would increase the likelihood that healthcare would be sought from a private source, using CHAMPUS or private insurance, in order to meet increased needs while avoiding the access problem.

Based upon this assumption, retiree and active duty sample populations will be asked to provide their total family income, rounded off to the nearest thousand dollars. Family income was stressed to allow for the fact that many family members other than the military sponsor also work and contribute significantly to the family's total available income. From this data, statistical techniques can be utilized to estimate and test hypotheses about the relationship between total family income and utilization of private healthcare sources by the sample population.

    2.   The responses of beneficiaries who cannot easily access

MACH, either due to distance, poor quality road networks, driving time, lack of transportation, or numerous other variables, will significantly differ from the responses of beneficiaries who can. Unfortunately, it is well beyond the scope of this study to attempt to determine exactly why beneficiaries in a given geographic area are utilizing private healthcare sources. The objective of the study is simply to determine the proportionate numbers. However, since the sample population of beneficiaries will be asked to provide their residential zip code on the questionnaires, it will be possible to identify those zip codes where the percentage of respondents claiming to use private healthcare sources is high.

3.   The utilization of private healthcare by beneficiaries whose sponsor resides within the CHAMPUS catchment area of MACH will not significantly differ from the utilization of private healthcare by beneficiaries whose sponsor resides outside of the catchment area.   For both retiree populations and active duty populations, the sponsor must reside in the CHAMPUS catchment area of MACH in order for his/her beneficiaries to be included in the study. While it is unknown exactly how many beneficiaries this requirement will exclude from the study, it is believed to be small. This belief is given some credence by the fact that only 106 of the 4,082 government quarters on Fort Benning are currently occupied by family members whose sponsor is not assigned to the area. Regardless of the actual number, there is no reason to believe that the utilization of private healthcare

sources for these beneficiaries would significantly differ from the population as a whole. Factors such as family income and distance, rather than the presence of the sponsor, would have a much greater impact. Thus, even if this portion of the population were included, there is no reason to believe that their utilization of private healthcare sources would significantly differ from beneficiaries whose sponsors do reside within the MACH CHAMPUS catchment area.

4. The utilization of private healthcare by U.S. Navy and U.S. Air Force retirees, retiree family members, and active duty family members residing within the CHAMPUS catchment area of MACH will not significantly differ from the utilization of private healthcare by U.S. Army retirees, retiree family members, and active duty family members residing within the catchment area. The nature of the study does not allow U.S. Navy and U.S. Air Force retirees and active duty personnel to be included in the sample population. As a result, these beneficiaries and their family members will be excluded. However, there is reason to suspect the utilization of private healthcare by these beneficiaries would significantly differ from U.S. Army retirees, retiree family members, and active duty family members.

Limitations

1. The study, as designed, will not address the sources of healthcare currently being utilized by U.S. Navy, Air Force, or other non-Army beneficiaries within the CHAMPUS catchment area of Martin Army Community Hospital.

2. Any Army eligible beneficiary whose active duty sponsor is assigned to a unit outside of the CHAMPUS catchment area of Martin Army Community Hospital will not be included in the survey.

3. Any Army eligible beneficiary whose retired sponsor lives out of the CHAMPUS catchment area of Martin Army Community Hospital will not be included in the survey.

4. While the SIDPERS database will provide a listing of permanent party soldiers who claim one or more family members, there is no guarantee that the family members reside within a forty mile radius of Fort Benning. To insure only the responses from soldiers with family members in the MACH CHAMPUS catchment area are included in the study, the questionnaire for active duty soldiers asked them to identify how many family members they have residing within forty miles of MACH. Those who respond 'none' will be dropped from the study.

Review of the Literature

Unlike sampling or data processing, the design of a good questionnaire is not a science or technology, but rather an art. All questionnaire writers have their own approach to instrument design. In addition, the various approaches are modified according to the objectives of the research, the availability of accurate information, and the limits of available time and resources (Sheatsley 1983, 201-203).

Despite this diversity, there are steps to questionnaire design that are applicable to all situations. These steps can

generally be categorized as determining needs, questionnaire development, and finally, the design of the actual questionnaire.

In an organizational survey reference book prepared for the U.S. Army Organizational Effectiveness Center and School, Ulrich states that surveys should only be conducted when there is a specific need. Thus, Ulrich suggests the first step to the development of any questionnaire should always be to determine the need for, and objectives of, the survey (1983, 9). Sheatsley concurs with this approach, stating that the first task is to determine the things one needs to know from the respondent in order to meet the survey's objectives. As Sheatsley points out, the obvious corollary to this statement is that one must have identified the objectives for the survey (1983, 202-203).

After the need and objectives for the survey have been established, work can begin on questionnaire development. Ulrich suggests that there are three issues which should be addressed in order to determine the size and nature of the survey. First, decide on what information is required to meet all stated objectives of the study. This allows the researcher to ensure that the information required in not readily available, and also prevents development of a survey which asks far more questions than the designer has use for, or to which the respondent is likely to respond. Second, identify the legal limits in gathering the information. The designer should be aware that some questions are likely to be illegal because of privacy laws, and take care to avoid them. Finally, identify when the results are

needed, and then divide available time between requirements to design, administer, and analyze the results of the survey. This ensures that the available time is utilized where it is most needed, and just as importantly, not used to support one aspect of the study at the expense of another (Ulrich 1983, 15).

After these steps have been accomplished, development of the actual questions to be used in the survey can begin. Sheatsley points out that because of the need to tailor questions to the intent and design of each questionnaire, there are no all-purpose rules that automatically result in a well-written questionnaire. However he suggests a few basic principles to follow that help avoid respondent confusion, misunderstanding and response bias. For example, when choosing the language of the questionnaire, keep it simple. Avoid lengthy questions. One should also word questions to specify alternatives rather than presenting one side of an issue and asking respondents for their reactions. Finally, allow for the equal expression of all points of view in order to avoid influencing respondents (1983, 212).

In addition to the rules recommended by Sheatsley, Ulrich suggests several others for consideration. Care should be taken to ensure that each question only addresses a single purpose. Words such as 'and,' 'or,' and the use of slashes often indicate more than one topic, and should be avoided. Specialized terminology or abbreviations should not be used. Questions should be short and concise, and the language simple. Double negatives often lead to confusion on the part of the respondent,

and should be avoided. Finally, errors in terminology, grammar, and spelling often alienate respondents to the questionnaire, and should be avoided (1983, 29-36).

In addition to these rules for constructing questions, consideration must be given to ensuring all questions elicit reliable, valid, and representative information. Reliable information refers to information that is the same over time. For example, if the same individual were weighed three consecutive times, the results should be the same for each time on the scale. Valid information refers to information that is correct and real. For example, if the scale used to weigh the individual measured the weight at 150 pounds all three times, the scale would be considered to be reliable. However, if the individual's true weight were 155 pounds, the weight obtained would not be valid. Representative information refers to information from a few that accurately represents many. For example, if the average weight of 10 individuals selected from a population of 100 is the same as the average weight for the entire population, the sample is representative of the population (Ulrich 11, 1983).

Another crucial consideration when drafting the questions to be used for the survey is the type of scale to be used with each question. The term 'scaling' is applied to the process of assigning numbers or symbols to a property of an object in order to impart some characteristic of numbers to the property in question. Scales are easy to construct, but it is difficult

indeed to assure that they measure reliably. It is even more of a challenge to determine scale validity, especially with abstract concepts. It is therefore important to consider response methods for each question drafted, and determine if it is desirable to quantify the dimensions of the response; if so, some type of scaling classification must also be considered (Emory 1980, 213-216.

After each of these factors have been considered, attention should be given to placing questions into a meaningful order and format. Sheatsley points out several general rules for ordering that routinely apply to all surveys. First, make the opening questions easy and non-threatening. Second, the corollary to the first rule is to approach the difficult or sensitive questions only when the respondent is well into the questionnaire. Third, make sure the questions follow some kind of psychological order, so that one question leads easily and naturally into the next. Fourth, start with broad questions about a topic or issue and then ask more specific questions. Fifth, prepare the respondent for shifts in topics (1983, 221).

Sheatsley states that questionnaire format is largely a matter of the researcher's own preference. However, he suggests several areas that need to be considered when deciding on an appropriate questionnaire format. For example, the preparation of some sort of standardized survey introduction is crucial for any survey. Respondents universally have reservations about taking a survey, but a standardized introduction can alleviate

these reservations by stating who the survey is for, and what it is about. The issue of questionnaire length also needs to be considered. Longer surveys raise the cost at every stage of the process, and greatly increase the likelihood that the respondent will either not complete the survey or give hurried answers. Shorter questionnaires, on the other hand, greatly reduce the amount of information that can be gathered. However a short survey that is crowded and cluttered may greatly reduce the psychological length of the survey and make a 20 minute questionnaire insufferable. Even seemingly innocent format conventions, such as leaving white space below open questions instead of lined space, can affect response. Finally, specific formatting conventions such as boldfacing answers, use of colors, or accepting poor quality of photocopying, can enhance, or detract, from the survey (Sheatsley 1983, 219-225).

Research Methodology

Questionnaire Development

Prior to developing a survey instrument, the literature was reviewed for current trends, methodology and techniques used in conducting surveys. Emphasis was placed on the utilization of questionnaires since this technique was deemed most consistent with the needs and resource limitations of the study.

Based upon the results of the literature search, the questionnaire shown at Appendix B was developed for surveying active duty soldiers regarding the utilization of private healthcare sources by their family members. The questionnaire

began with a cover letter from the Commander of MACH to the active duty sponsor. The purpose of the cover letter was to explain the purpose of the questionnaire, and to relate its importance to the respondent. It was felt that this would increase the likelihood that the recipient would respond, thereby increasing the overall response rate. The second page of the questionnaire began with instructions for completion. It explained that the questionnaire consisted of two sections, and provided the topic of each. It also gave instructions for mailing the questionnaire when completed.

Section I of the questionnaire consisted of six questions soliciting background information. The information requested consisted of demographic data about the active duty soldier, to include rank, zip code for the active duty soldier's current home address, the number of family members currently residing within the CHAMPUS catchment area of MACH, family member enrollment on DEERS, total family income, and whether the active duty soldier and/or his family members were covered by either supplemental or comprehensive private health insurance. Section I ended with instructions for the active duty sponsor to go on to Section II if the active duty sponsor had family members living within forty miles of MACH. If the active duty soldier did not have family members living within forty miles of MACH, he was asked to return the questionnaire to his unit First Sergeant.

Section II of the questionnaire consisted of four questions. The first question asked the active duty soldier to identify how

often his family members went to MACH, a private physician, and any other healthcare source when they were sick and needed to be seen for an <u>office visit</u>. The second question asked the active duty soldier to identify how often his family members paid for the office visit using personal money without reimbursement, CHAMPUS, Medicare, or private health insurance, when payment was required. The third question asked the active duty soldier to identify how often his family members went to MACH, a private hospital, and any other healthcare source when he was sick and needed to be <u>hospitalized</u>. The fourth and final question asked the active duty soldier to identify how often his family members paid for the hospitalization using personal money without reimbursement, CHAMPUS, Medicare, or private health insurance, when payment was required.

A five point scale was provided in Section II in order to allow the respondent to select how often each of three healthcare sources listed was used. The scale was coded so that a response of `1` indicated the soldier's family members used the healthcare source indicated `all of the time;` a response of `2` indicated the soldier's family members used it `most of the time;` a response of `3` indicated the soldier's family members used it `about half of the time;` a response of `4` indicated the soldier's family members used it `very little of the time;` and finally, a response of `5` indicated the soldier's family members used it `none of the time.` Section II ended with instructions for returning the completed questionnaire, either to the unit

First Sergeant, or through the post distribution system.

After the active duty questionnaire was completed, the questionnaire shown at Appendix C was developed for surveying retirees regarding the utilization of private healthcare sources by themselves and their family members. As before, the questionnaire began with a letter from the Commander of MACH to the retiree that related the purpose of the questionnaire, and its importance. As before, the second page of the questionnaire began with instructions for completion. It explained that the questionnaire consisted of three sections, and provided the topic of each. It also gave instructions for mailing the questionnaire when completed.

Section I of the retiree questionnaire was identical to the active duty questionnaire except for one additional question. For the retiree questionnaire, the very first question of Section I asked the respondent to provide his age. The purpose of this question was to qualify the type of supplemental policy the retiree carried if the retiree indicated on question number seven that he was covered by a supplemental policy. Since by law, CHAMPUS benefits end at age sixty five when the retiree becomes eligible for Medicare, any respondent that was age sixty five or older must carry a Medicare supplemental private health insurance policy. Likewise, any respondent under the age of sixty five with supplemental insurance must carry CHAMPUS supplemental policy. All other questions were the same as those found on the active duty questionnaire. Section I ended with

instructions for the retiree to go on to Section II.

Section II consisted of the same four questions found in Section II of the active duty questionnaire; however, all four questions were slightly modified so that they elicited responses regarding where the retiree received healthcare for himself, and the payment method used. The same five point response scale found in Section II of the active duty questionnaire was also provided. Section II ended with instructions for the retiree to go on to Section III if the retiree had family members living within forty miles of MACH. If the retiree did not have family members living within forty miles of MACH, instructions were provided for returning the completed questionnaire.

Section III consisted of the same four questions found in Section II; however all four questions were slightly modified so that they elicited responses regarding where the retiree's family members received their healthcare, and the payment method used. The same five point response scale found in Section II was also provided. Section III ended with instructions for returning the completed questionnaire.

Database Selection

After the questionnaires for surveying the active duty and retiree sample populations had been developed, the next step was to find a database which could be used to identify members of the populations of interest. For the purposes of the study, this included two separate populations: first, the population of all permanent party active duty soldiers assigned to Fort Benning,

Georgia, with at least one family member residing within the MACH CHAMPUS catchment area; and second, the population of all U.S. Army retirees residing within the MACH CHAMPUS inpatient catchment area.

It was recognized early on that databases contained at MACH could not be used to identify members of the populations of interest because they would exclude those individuals that chose not to use MACH for their healthcare needs, and thus would bias the survey results; instead, a database had to be found that was independent of hospital use. It was also recognized that for the same reason, surveys would need to be administered away from the hospital, ideally by being sent to the sample populations selected at either their home or place of work. A search therefore began for a database, preferably automated, that contained the names and an address for all retirees and active duty soldiers with dependents that lived in the MACH CHAMPUS catchment area. The DEERS automated database was briefly considered and then discarded. It was felt that since the DEERS database was not updated automatically every time a soldier or retiree moved, it would not contain an accurate listing of addresses. In addition, since a retiree had to voluntarily go to a military installation and register for the DEERS system, it was felt that using the DEERS database would exclude those retirees who chose not to do so, and bias the study.

In searching for a common denominator that would link all retirees within the MACH CHAMPUS catchment area, it was

discovered that all retirees receive a Federal W-2 Form from the U.S. Army Retired Pay Operations, Fort Benjamin Harrison, Indiana. Further inquiry revealed that the operations center did, in fact, have an electronic database which contained the addresses of all known U.S. Army retirees, or their widows, arranged by zip code. Furthermore, a copy of this database was transmitted monthly thru Washington, D.C., to the Director of Information Management, Fort Benning, Georgia. The database was then used to generate a report titled "Retired Army Personnel Roster-By Zip Code," which was used by the Retired Services Office, Fort Benning, to contact retirees and to mail out retiree news bulletins.

Several advantages to using this database became readily apparent. First, because a federal tax return cannot be filed without a W-2 Form, it was felt that retirees would be very active in keeping their address listing current; therefore, the database was considered the most accurate found. Second, because the database was arranged by zip code, it was determined to be relatively simple to extract out the listings for those zip codes which defined the MACH CHAMPUS catchment area. A copy of the "Retired Army Personnel Roster-By Zip Code," dated 5 February 1988, was obtained and used for the research study. At the same time, the database was used to print address labels for all retirees so that the retiree questionnaire could be mailed directly to each of the individuals selected as part of the randomly selected sample population.

Identifying a similar database for active duty soldiers presented considerably more difficulty. Active duty soldiers receive their Federal W-2 Forms attached to their Leave and Earning Statement (LES) during January of each year. The LES is sent to the soldier's unit of assignment, based on a unit identification code. Thus, a similar database for active duty soldiers did not exist. Inquiries were then made into the capabilities of the U.S. Army's automated personnel system, SIDPERS. It was found that all officers have a data field for a local address on an electronic database used to generate the Officer Record Brief; however, enlisted soldiers currently have a manual personnel record that is locally maintained, and thus have no similar electronic database for local address in SIDPERS. Inquiries were then made into the installation Housing Referral Office (HRO), which assists soldiers in finding off post housing. It was found that the HRO does maintain a local address on soldiers living off post, but it is contained in a manual system that consisted of over five thousand cards.

After exhausting all possibilities for finding an electronic database that contained a local address for each permanent party soldiers with dependents, a different approach was taken. It was discovered that the SIDPERS database could generate a listing of all permanent party soldiers that claimed one or more dependents, arrayed by unit, making it possible to send the active duty questionnaires to unit addresses, rather than home addresses. As a result, a special, non-standard report which listed all

units on Fort Benning that contained permanent party soldiers who claimed one or more dependents was requested and received from the local SIDPERS Interface Branch in April 1988. Unit addresses could then be used to forward questionnaires to soldiers selected as part of a randomly selected sample population.

Population Definition and Sample Selection

In establishing a database that would allow the mailing of the questionnaires to active duty soldiers and retirees, considerable progress had also been made on the next step, which was to define the populations and randomly draw samples from each. While the SIDPERS report listed all permanent party soldiers on Fort Benning that claimed one or more dependents, it did not give either a cumulative or unit total. Thus, in order to find out how large the population was, and then to compute the size of a 10% sample, the number of permanent party soldiers with dependents in each of the units listed in the SIDPERS report had to be first counted and recorded. The results of the count, shown in Appendix D, indicated there were 203 units on Fort Benning that contained a total of 8,968 permanent party soldiers with one or more dependents. From this list, 488 permanent party soldiers contained in the seven units shown in Table 1 were removed. The first unit, a Military Entry Processing Station, was removed because it was located in Montgomery, Alabama, which fell outside of the MACH CHAMPUS catchment area. The remaining units belonged to either the MEDDAC or DENTAC. These units consist of medical and dental personnel who work at, or in

	UIC	UNIT NAME	NO. SOLDIERS CLAIMING DEP
1.	18YAA	MEPS Station, Montgomery AL	12
2.	2L3AA	USAMEDDAC, Fort Benning, GA	392
3.	2L3DC	USADENTAC, Fort Benning, GA	53
4.	2L301	TMC, Eglin AFB, FL	5
5.	2L302	TMC, Dahlonega, GA	4
6.	2L304	Vet Br, MCLB, Albany, GA	1
7.	2L31A	Med Hold Co, Fort Benning, GA	21
		TOTAL:	488

Table 1. Units Removed from the Population of Permanent Party Soldiers Claiming Dependents at Fort Benning, Georgia 31909

conjunction with, MACH, and it was felt that they have greater access to medical care for their family members. Thus, results from these units would not necessarily be representative of other soldiers on the installation. After these units were removed from the population, a total of 196 units with 8,840 permanent party soldiers claiming one or more dependents remained, as shown in Appendix E. The desired sample from this population was 10%, or 884 soldiers.

The SIDPERS database used to identify all permanent party soldiers on Fort Benning that claimed one or more dependents could not generate address labels, either for a local address or for a unit address. As a result, sending questionnaires to each randomly drawn soldier required manually producing address labels for each. Due to the size of the sample, and a lack of manpower to accomplish such a task, this was a significant logistical problem. To circumvent the problem, it was decided to randomly

draw units, rather than individual soldiers, for sampling.

In taking this approach it was assumed that soldiers whose family members used MACH, and soldiers whose family members used private healthcare sources, would be randomly distributed throughout all units on the installation. Similarly, soldiers whose family members used personal money without reimbursement, CHAMPUS, Medicare or private health insurance would also be randomly distributed throughout all units on the installation. Thus, it was determined that it would not bias the sample selection to randomly draw units, rather than individual soldiers.

The actual random draw of permanent party units was accomplished by placing a piece of paper with each unit identification code and the number of soldiers in the unit that claimed family members, inside of a container. Units were then blindly drawn, without replacement, with a mixing of the container between each draw. As a unit was randomly drawn, its identification, the number of soldiers in the unit that claimed one or more dependents, and a cumulative total of the number of soldiers drawn, were all recorded. Drawing continued until the desired sample size of 884 soldiers had been exceeded. Using this method, the 17 units with 926 soldiers shown in Table 2 were selected as the sample for the active duty population.

After the random sample of active duty soldiers had been selected, the retiree random sample was selected. The 'Retired Army Personnel Roster-By Zip Code,' dated 5 February 1988, was

	UIC	UNIT NAME	NO. SOLDIERS CLAIMING DEP	CUM TOTAL
1.	A4KAA	187th In Det, Pathfdr Abn	4	4
2.	4H29A	A Co, 4th Bn, 36th IN Trng	14	18
3.	4H2BH	HHC, 1st Bde, USA Trng Ctr	29	47
4.	HNKBO	B Co, 3rd Bn, 14th IN Reg	54	101
5.	4H23D	D Co, 1st Bn, 19th IN Trng	18	119
6.	4H21D	D Co, 3rd Bn, 32d IN Trng	15	134
7.	4H28E	E Co, 1st Bn, 38th IN Trng	12	146
8.	ALVBO	B Co, 2nd Bn, 14th IN Reg	48	194
9.	HNKCO	C Co, 3rd Bn, 14th IN Reg	64	258
10.	ARODO	D Co, 1st Bn, 58th IN Reg	48	306
11.	4H28B	B Co, 1st Bn, 38th IN Trng	10	316
12.	04902	ARI Field Unit, Benning	3	319
13.	GM6CO	C Co, 2nd Bn, 69th AR Reg	43	362
14.	OKEO6	USA Trial Defense Service	4	366
15.	AR4AA	HHC, 197th Inf Bde	210	576
16.	4H26C	C Co, 1st Bn, 50th IN Trng	15	591
17.	2L5AO	B Co, 1st Bn, 11th IN, USAIS TSB	335	926

TOTAL NUMBER OF UNITS SELECTED: __17__
TOTAL SAMPLE SIZE: __926__ Permanent Party Soldiers

Table 2. Randomly Drawn Sample of all Permanent Party Units on Fort Benning with Soldiers Claiming Dependents (Listed in Order of Selection)

used for this purpose. As previously mentioned, the report listed the names and addresses all U.S. Army retirees and their widows, arranged by zip code listings. It was quickly noted that the report contained listings for many more zip codes than just those contained in the MACH CHAMPUS catchment area. Therefore the first step in the sample selection process was to separate out the zip codes in the catchment area. As each sheet was separated from the report, care was taken to ensure the pages remained in chronological order, so the zip code listings also remained in order, arranged from the lowest to the highest, which

ensured that the population remained stratified by zip code. This was considered crucial in order to ensure that, simply as the result of luck, the random sample selected was not biased toward individuals who lived either close to or far from MACH.

After all of the zip codes for the MACH catchment area had been extracted, a total of 49 listings for the State of Georgia, containing 7,821 retirees and retiree widow/widowers, and 24 listings for the State of Alabama, containing 1,509 retirees and retiree widow/widowers, had been compiled. A copy of this extract is shown in Appendix F.

The actual process of selection then began by preparing ten slips of paper with a number from ˙0˙ to ˙9˙ on each. The slips were then folded so the number on each was hidden, placed into a container, and shaken thoroughly to mix. A single slip of paper was then blindly drawn, which contained the number ˙6˙. The names on the report were then counted, beginning with the first name on the report, until the name of the sixth individual appearing on the report was reached. This name was then highlighted. From this initial entry point, counting continued, with the name of every tenth individual counted being highlighted. This procedure continued until all names listed on the report for the State of Georgia and for the State of Alabama had been counted, which resulted in a total of 934 names being highlighted. The highlighted names were then designated as the retiree random sample. The sample selected, listed by zip code, is shown at Appendix G.

Obtaining a random sample in the manner described ensured that approximately 10% (rounded to the nearest whole unit) of all zip code listings were selected for the sample. Thus, individuals living further away from MACH were proportionately represented in the sample.

Survey Administration

After random samples had been selected for both groups, the questionnaires were administered. In the case of the active duty, this was accomplished by sending the exact number of questionnaires indicated by the SIDPERS database to the unit selected, through the post distribution system. Along with each packet of questionnaires, a cover letter signed by the Commander of MACH to the unit commander, instructions for administering the survey, and a copy of the SIDPERS roster for the unit containing the names of the soldiers to be surveyed were included, as shown at Appendix H. As a matter of convenience, pre-addressed return envelopes were also provided to each unit.

The primary purpose of the cover letter was to serve as an introduction to the survey. The letter explained the purpose of the survey, and stressed its importance in providing comprehensive healthcare to Fort Benning family members. It was hoped that this information would encourage unit commanders to fully cooperate with the project.

The instructions provided contained several important points. First, they stressed the importance of administering the questionnaire only to the soldiers listed on the SIDPERS roster,

and requested that any questionnaire not completed because the solider listed was not available be destroyed. Second, the instructions requested that the SIDPERS roster provided be annotated to indicate those soldiers in the unit who were not available to complete the survey, and returned with the completed questionnaires. The instructions also outlined two acceptable methods of administering the questionnaires: unit formation, where the questionnaires were to be passed out in formation and collected by the 1SG after being completed, and returned in the pre-addressed envelopes provided; or, unit distribution, where the questionnaires were to be sent to each individual through the unit's distribution system, and returned directly to MACH through the post distribution system (to support the latter method, all questionnaire were stamped with a return address on the back of the last page prior to being forwarded to the unit; thus, each respondent simply had to fold the completed questionnaire, staple it, and drop the questionnaire in any outgoing post distribution box). The instructions also requested that the completed questionnaires be returned within two weeks of receipt by the unit. Finally, the instructions listed the name and telephone number of the author as a point of contact for any questions regarding the questionnaires.

All active duty questionnaires were forwarded through the post distribution system to the selected unit population on Thursday, 5 May 1988.

Administration of the questionnaire to the retiree sample

population was accomplished using the U.S. Mail service. The

'Retired Army Personnel Roster-By Zip Code,' database was used

to generate address labels for the entire population. Using the

sample selection method previously described, the sample

population was selected. A label for each individual selected

was then affixed to an envelope, and a retiree questionnaire and

a pre-addressed, business reply envelope placed inside. The

envelopes were then sealed, and stamped with MACH's return

address. All envelopes were then delivered to a U.S. Post

Office, where they were processed as bulk mail. All retiree

questionnaires were delivered to the U.S. Post Office on Monday,

16 May 1988.

Establishment of a Data File for Completed Surveys

In order to facilitate computer assisted analysis of the

data contained on returned questionnaires, an electronic data

file for both questionnaires had to be created in order to allow

responses to be entered into an electronic database. This

process was accomplished using SPSS/PC+ Data Entry[1] software, and

involved several steps. First, each variable to be analyzed had

to be identified. Second, each variable had to be defined with a

name, label, type (string or numeric), length, and symbol for

missing entries. Third, specific value labels were defined for

each variable. Fourth, an allowable range of values was entered

for each defined variable.

One variable was defined for each question posed on both the

active duty and the retiree questionnaires. In addition, an

additional variable was created for questions regarding the zip code and the annual family income of the respondent. In the former case, the additional variable `distance` was created to allow the zip code provided by the respondent to be collapsed into distance groups of 0-10 miles, 11-20 miles, 21-30 miles, or 31-40 miles from MACH. This was done in order to allow a comparison of responses between individuals living various distances from MACH during the analysis. In the latter case, the additional variable `incomsum` was created to allow the annual family income reported by the respondent to be collapsed into income groups of less than $15,000.00, $15,000.00-$29.999.99, and greater than $30,000.00. This was done in order to allow a comparison of responses between individuals with varying levels of annual income. Complete listings of the variables defined for both the active duty and retiree questionnaires are shown at Appendix I and Appendix J, respectively.

Value labels were created to support the full range of expected responses for each variable defined. For example, the values created for the variable `rank` ranged from 1-9, and represented the same rank structure used in the SIDPERS roster to define the active duty population. The same value labels were used for the retiree questionnaire for uniformity, and to allow comparisons of data between the two sample populations. The symbol `0` was defined for all variables to represent a missing response to a question. The symbol `.` was also defined for all variables to represent a response where the words `Not

Applicable' or 'N/A' were entered by the individual completing the questionnaire. Complete listings of the value labels used with the variables defined for both the active duty and retiree questionnaires are shown at Appendix K and Appendix L, respectively.

Ranges corresponding with the value labels and the symbols used to represent missing responses were defined for each variable defined on both the active duty and retiree questionnaire, as shown at Appendix M and Appendix N, respectively. Use of ranges for each variable caused the software program to automatically question entries outside of the defined range, and therefore greatly reduced errors resulting from inadvertently striking a wrong key during the coding process.

Coding Completed Questionnaires

After a data file had been created for both the active duty and retiree questionnaires, the data on the completed questionnaires was ready to be entered. In order to ensure uniform handling of all responses, a set of entry rules was established for both questionnaires. These rules were as follows: 1) All questions left blank by the respondent were coded with a '0' to indicate a missing response. 2) All questions answered with the letters 'N/A' by the respondent were coded with a '.' to indicate the question was not applicable. 3) For Section II only, a response of '1' (all of the time) on any of the questions in a set resulted in a code of '5' (none of

the time) being entered for all remaining questions in the same set which were left blank by the respondent. For example, in Section II, question 1, if an individual indicated they used MACH for all of their office visits, and left the other choices blank, then under this rule a `5` was entered for the blank questions to indicate the respondent did not utilize them. 4) For Section II only, a response of `3` (about half of the time) on any two of the questions in a set resulted in a code of `5` (none of the time) being entered for all remaining questions in the same set which were left blank by the respondent. For example, in Section II, question 2, if an individual indicated they used personal funds without reimbursement `about half of the time` to pay for their office visits, and used CHAMPUS `about half of the time` to pay for their office visits, while leaving the two remaining choices blank, then under this rule a `5` was entered for the blank choices to indicate the respondent did not utilize them. 5) Invalid responses within a set were coded with a `0` to indicate a missing response. For example, in Section II, question 2, if an individual indicated they used personal funds without reimbursement `all of the time` to pay for their office visits, and also used CHAMPUS `all of the time` to pay for their office visits, then under this rule both responses were coded with `0` to indicate a missing response. 6) Inconsistent responses between two separate sets of questions were coded as marked, despite the inconsistency. For example, in Section II, question 1, if an individual indicated they used MACH `all of the

time' for their office visits, and then on question 2 indicated
they used personal funds without reimbursement 'all of the time'
to pay for the office visits, both responses were coded as marked
despite the inconsistency.[3]

The final rule was established when it was noted that such
an apparent inconsistency could in fact be a valid response for
both questions in the mind of the respondent. For example, a
case can be made for soldiers who have transferred to Fort
Benning within the past two years. Question 1 in Section II
lists MACH as one of three choices for office visits; thus, an
individual who utilized MACH for all of their outpatient needs
since being assigned to Fort Benning could indicate 'all of the
time' as a response to this question. However, the same
individual might have previously been assigned to an area where
CHAMPUS was the only alternative for healthcare. Since question
2 specifically excludes MACH, the respondent may feel indicating
that CHAMPUS was used 'all of the time' to pay for the office
visit was a valid response based on experiences from the previous
duty station. A second case can be made if an individual were
seen at MACH for a problem beyond the capabilities of the staff,
and then directed to go downtown under the CHAMPUS program to
receive treatment. In the mind of the individual, MACH might
very well be where they receive their care, and hence they
indicate 'all of the time' when asked where they go for an office
visit. At the same time, since they did have to pay for the care
they received downtown using the CHAMPUS program, they indicate
they used CHAMPUS 'all of the time' to pay for the visit. Based

on the feasibility of these explanations, it was decided to code all inconsistencies between sets of questions as marked.

Endnotes

[1]SPSS/PC+ Data Entry is a copyrighted software package developed by SPSS, Incorporated to accompany a statistical analysis system entitled "Statistical Package for the Social Sciences/Personal Computer +".

[2]The variable "Zipcode" was used to identify the zip code for the respondent's local address. The variable "Distance" was added to allow zip codes within distances of 0-10 miles, 11-20 miles, 21-30 miles, and 31-40 miles from MACH to be grouped together. This was done in order to allow a comparison of responses between individuals living various distances from MACH during the analysis.

[3]An eligible beneficiary using a military medical treatment facility, such as MACH, for an office visit, is not required to pay for any component of the services rendered. Hence, it is inconsistent to indicate any type of payment when the respondent states they are using MACH "all of the time" for their office visits.

CHAPTER II

DISCUSSION

General Background

Measurement can be considered to be the assignment of numbers to some phenomenon of interest. Scientists conventionally speak of three levels of measurement. The highest and most precise level is known as interval measurement. The name is derived from the fact that the measurement is based on a unit or interval that is accepted as a common standard and that yields identical results in repeated applications, such as measuring height using inches. The second level of measurement is called ordinal. At this level of measurement it is possible to say that one object (or event) has "more" or "less" of a given characteristic than another, but it is not possible to say how much more or less. Generally at this level there is no agreed-upon standard. Almost all assessments of attitudes and opinions are at this level. The third level, known as nominal measurement, totally lacks any sense of relative size or magnitude; it allows one to say only that things are different. The ability to state exactly how much of a characteristic or trait is possessed by an object (interval measurement), or even to state that it has more or less of the characteristic (ordinal measurement) is lost. Nevertheless, since many demographic elements such as race, sex and occupation fall into this

category, nominal measures are generally relative to any study (Meier and Brudney 1981, 95-102).

The significance of recognizing different levels of measurement lies in the fact that the statistics which may be calculated in order to summarize the distribution of single variables, and the statistics which may be calculated in order to describe the relationship between variables, differ from level to level. For example, when computing measures of central tendency for interval data, it is possible to find the mean, median, and mode of the data. When dealing with ordinal data, it is possible to rank objects or observations, but is not possible to locate them precisely along a scale. Because there are no numeric values attached to the response, as is the case with interval variables, it is not possible to calculate the mean for a variable measured at the ordinal level; however, it is possible to calculate the median or the mode. When dealing with nominal data, again it is not possible to assign numerical scores to cases, and thus it is not possible to calculate the mean for this type of data. In addition, it is not possible to rank cases of nominal variables into any meaningful order, so it is not possible to calculate the median for nominal data. A summary of these rules, known as the 'hierarchy of measurement,' is shown in Table 3 (Meier and Brudney 1981, 103-107).

Following the hierarchy of measurement rules, the mean, median, mode and standard deviation have been calculated for responses to questions about age, number of family members, and

the total family income, which are interval measurements. On the other hand, only the mode has been calculated for the question regarding the zip code for the respondent's local address, which is the only nominal measurement in either questionnaire. All remaining questions in both questionnaires are ordinal measurements, and are therefore presented with the mode and median as the measures of central tendency.

Level of Measurement	Measurement of Central Tendency		
	Mode	Median	Mean
Interval	X	X	X
Ordinal	X	X	
Nominal	X		

Table 3. Hierarchy of Measurement

In the same fashion that a measure of central tendency must be carefully selected to match the type of data being analyzed, the same can be said for other statistical techniques. Great care has been taken throughout this study to ensure that the statistics used to analyze each variable are both meaningful and appropriate for the type of measurement used.

In addition to noting the statistical limitations of the data, it is also important to address design limitations of the questionnaires themselves. First and foremost, the limitations of all ordinal data must be recognized. For example, in question #1, Section II of the active duty questionnaire the respondent is asked to indicate how often his family members used MACH, a

private physician or another healthcare source for outpatient services by selecting one of five responses from a scale provided. The responses provided in the scale allowed the respondent to indicate varying degrees of time the respondent used each healthcare source (i.e., all of the time, most of the time, half of the time, little of the time, or none of the time). For this type of ordinal measurement, a response which indicates MACH was used "most of the time" does not express exactly how many times the facility was used, or how much less than if it had been used "all of the time." This is equally true for comparisons between the three healthcare sources given as choices. Thus, a response which indicates a private physician was used "all of the time" does not delineate whether the respondent actually used the physician more or less times than another respondent who used MACH "most of the time." This limitation applies to all of the questions contained in Section II of the active duty questionnaire, and all of the questions contained in Section II and III of the retiree questionnaire. It is a limitation of ordinal data which must be recognized and given due consideration in the interpretation of the data from the study.

A second limitation is that the design of the questionnaires did not allow respondents to indicate that neither they, nor their family members, had been sick during the past two years, and therefore did not require outpatient or inpatient care. During the coding of data for entry into the database, it was

noted that a great many of the respondents had indicated 'none of the time' as the amount of time they used each of the healthcare sources and each of the payment systems listed. It is believed that this was the respondent's way of indicating they had not been sick and therefore had not needed any of the healthcare sources listed, and had not used any of the payment systems listed[1]. This behavior seems logical, given that the questionnaire did not give respondents any other way of indicating they were not sick during the time frame specified. At the same time, other respondents were noted to use the response of 'none of the time' as it was originally intended, to exclude one or more of the choices to a question.

As a result of the multiple meanings apparently associated with the response 'none of the time,' it cannot be used to differentiate between a respondent who was not sick, and therefore did not need any healthcare source, and one who was sick, but still did not use the healthcare source indicated. This limitation applies to all of the questions contained in Section II of the active duty questionnaire, and all of the questions contained in Section II and III of the retiree questionnaire. Since this limitation compromised the interpretation of the response 'none of the time,' a decision was made to interpret all such responses as an indication that the choice so marked was not applicable to the respondent, and the response was coded into the database accordingly.

A third limitation is the presence of inconsistent

responses included in the database. The inconsistencies fall
into two similar, but distinct types: first, those which
occurred between two related questions, such as an inconsistent
response between a question regarding the source of outpatient
and inpatient care and the follow-on question regarding payment
methods used; and second, those which occurred between the
choices offered for a single question, such as an inconsistent
response between one or more of the choices given for healthcare
sources used, or between one or more of the choices given for the
follow-on question regarding the payment system used.

In designing the questionnaires, it was assumed that if an
individual indicated they used MACH 'all of the time' for either
outpatient or inpatient care, then they would indicate 'none of
the time' to the follow-on question regarding payment. Thus,
during the coding of responses for entry into the database, it
was noted that this did not always occur; some respondents who
indicated they used MACH for their either their outpatient or
inpatient care 'all of the time' would also indicate the use of a
payment system, such as personal money without reimbursement,
CHAMPUS, or private health insurance, in the follow-on question.
Comments made by respondents on the margins of the questionnaires
revealed several possible explanations for this type of
inconsistency. First, many respondents apparently failed to
recognize when the staff of MACH had disengaged from providing
outpatient care and referred the respondent to a civilian
physician to receive treatment under CHAMPUS. In this situation,

it appears that the respondent first sought outpatient care at MACH before being told to go to a private physician, and therefore felt it logical to state that MACH was used "all of the time." At the same time, since CHAMPUS was eventually used, it also seemed logical to indicate payment using this system on the follow-on question. Second, the apparent inconsistency may have actually been a valid response under certain circumstances. For example, if a respondent indicated that his family members received their outpatient care from MACH "all of the time," it would appear inconsistent to indicate on the follow on question that their outpatient care was paid for using personal money without reimbursement. However, this response is actually valid if one considers that inpatient care is not 100% free for active duty family members, retirees, or retiree family members; each must pay at least a per diem charge to cover the cost of food consumed. This money is generally paid out-of-pocket, without reimbursement. Thus, a response indicating MACH was used "all of the time" for inpatient care needs, and that personal money without reimbursement was also used "all of the time" to pay for the care received is a valid and logical response in this instance. Another example can be found in the fact that U.S. Army medical treatment facilities, such as MACH, currently bill private health insurance companies for inpatient care provided to beneficiaries. Thus, a response indicating MACH was used "all of the time" for inpatient care needs, and that private health insurance was also used "all of the time" to pay for the care

received is a valid and logical response.

In designing the questionnaires, it was also assumed that the response 'all of the time' would be used only one time by a respondent for each question, and that if used, all other choices for the same question would be marked 'none of the time.' Thus, if a respondent indicated his family members used MACH 'all of the time' for outpatient care, it was assumed that a response of 'none of the time' would be the only logical choice for his family member's use of a private physician or other healthcare source. However during the coding of responses for entry into the database, it was noted that this assumption also failed to be valid. Some respondents did, in fact, use the response 'all of the time' for more than one choice to a question, as well as in conjunction with responses that indicated the use of other healthcare sources. Comments made by respondents on the margins of the questionnaires revealed several possible explanations for this type of inconsistency. First, such behavior may be a reflection of respondents who went to MACH for their healthcare needs 'all of the time,' but were sent to a private physician or private hospital to obtain diagnostic tests under the supplemental care program. If this were the case, it is understandable that the respondent might indicate use of MACH 'all of the time,' and also indicate the use of a private physician or private hospital. Second, as mentioned before, the failure of a respondent to recognize that the staff of MACH has disengaged from providing healthcare and referred the respondent

to a private physician or private hospital for treatment could result in a respondent indicating MACH was used `all of the time` and that a private physician or private hospital was also used. Third, as mentioned before, the apparent inconsistency may have actually been a valid response under certain circumstances. For example, if a respondent indicated that his family members paid for outpatient or inpatient care received using personal funds without reimbursement, it would appear inconsistent to also indicate that any other payment system was used. However a response indicating that either CHAMPUS, Medicare, or private health insurance is used `all of the time,` and that personal money without reimbursement is also used `all of the time` to pay for the care received is logical if one considers that all three of these payment systems require a non-reimbursable copayment from the user. Thus, the respondent is providing a valid response to both questions.

During the coding of responses into the database, it could not be determined exactly which apparent inconsistencies were in fact valid responses and which were not. A decision was therefore made to code apparent inconsistencies of both types exactly as marked by the respondent. This decision was based on two primary factors: first, many of the inconsistencies noted could in fact be valid responses to the question as stated. This is especially true for inconsistencies in the responses to questions regarding the source and payment for healthcare. If this is a valid assumption, coding the response as is seems the

most appropriate course of action. Second, many of the inconsistencies noted are believed to stem from respondents who sought care at MACH, and failed to recognize when the hospital's staff disengaged from their care. If this is a valid assumption, then the error is not that use of either MACH or CHAMPUS was indicated; instead, the error is that the amount of time indicated for use of MACH ("all the time") and for use of a private physician ("none of the time") were both incorrect. Thus, in this case, it was felt that less bias would be introduced by coding the responses as marked, and recognizing that a private physician or other healthcare source was probably used and not marked, rather than omitting a source, MACH, and payment system, CHAMPUS, actually used by the respondent.

Admittedly, this limitation does allow an unknown degree of bias to enter into the results, and further limits the interpretation of the data. This limitation applies to all of the questions contained in Section II of the active duty questionnaire, and all of the questions contained in Section II and III of the retiree questionnaire.

The fourth and final limitation in the study is the unknown amount of bias entered into the study as the result of self selection by respondents. It is possible that individuals who use MACH for their healthcare needs felt a stronger interest in completing the questionnaire than someone who never used the facility. Thus, despite great care taken to reduce this type of bias by questionnaire design, sample selection and survey

administration techniques, it is possible that self selection bias by respondents occurred. It is not possible to determine the exact amount of bias that self selection contributed to the results; however, it is a possibility which should be recognized and given due consideration in the interpretation of the data.

Active Duty Questionnaire

Section I: Demographic Information

The active duty questionnaire was administered to a random sample of 926 permanent party active duty soldiers with at least one family member listed on the SIDPERS database. A total of 283 questionnaires were returned, for a response rate of 30.56%. This response rate was half of the desired rate of 60%.

Of the 283 received, a total of 66 completed questionnaires were excluded from the analysis. Of the 66 excluded, 31 were discarded because the respondent indicated no family members lived within the MACH CHAMPUS inpatient catchment area; 22 more were discarded because they were improperly completed; the remaining 13 were discarded because the respondent either omitted the zip code where the family members were residing, or listed a zip code outside of the MACH CHAMPUS catchment area. Thus, of the 283 completed questionnaires received, only 217 (23.43%) were actually coded and entered into the database for analysis.

The distribution of respondents by rank is shown in Figure 1. The modal rank was E5-E6, which accounted for 98 (45.2%) of the responses. A comparison of the expected percent response rate[2] versus the actual percent response rate, by rank, is shown

in Figure 2. This comparison demonstrates that the actual response rate for O-2s and below closely matched the expected rate, with the actual response rate for E-5s exceeding the expected rate by 14%. The actual response rate for O-3s and above was consistently lower than the expected response rate.
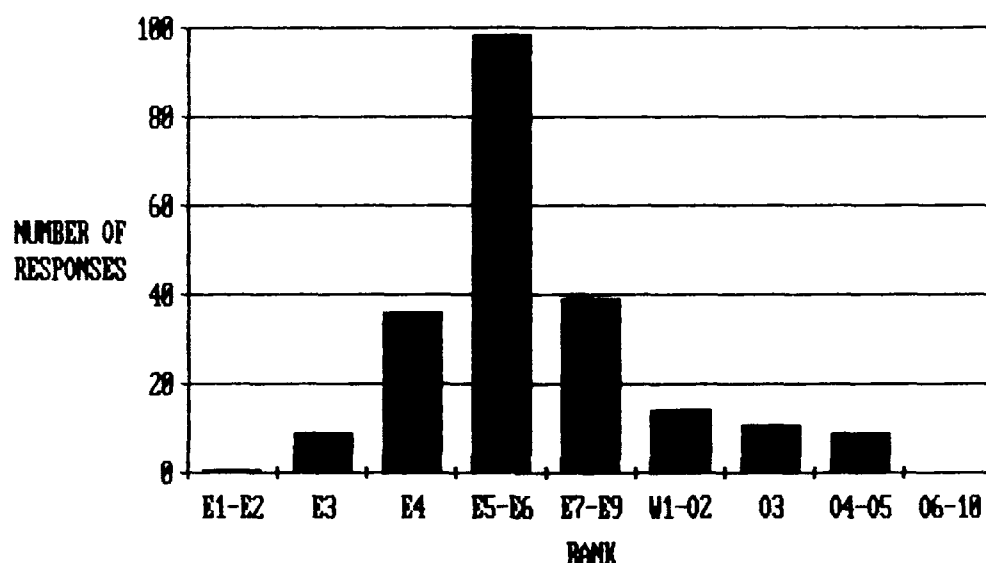
Figure 1. Distribution of Respondents
to the Active Duty Questionnaire by Rank

The distribution of respondents by distance from MACH is shown in Figure 3. This data was obtained by collapsing the respondent's current residential zip code into four groups, based upon the straight line distance from MACH. Not surprising, 207 (95.4%) of the respondents indicated that they live within 10 miles of MACH, nine (4.1%) live between 11-20 miles of MACH, and one (.5%) lives between 31-40 miles of MACH.
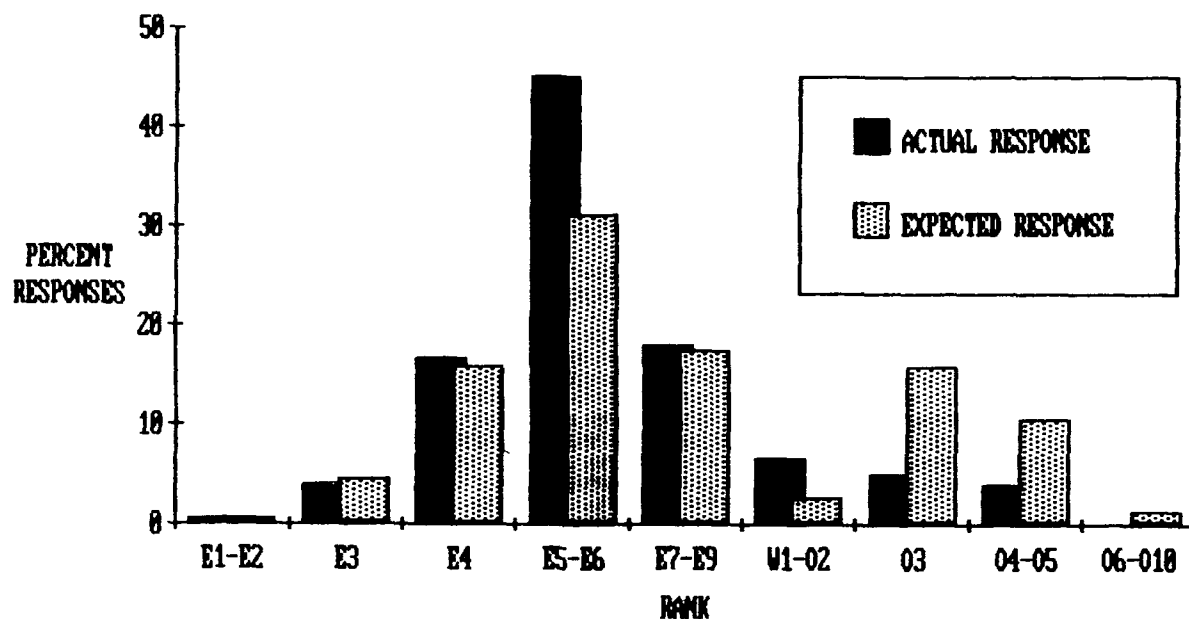
Figure 2. Distribution of Expected vs Actual Responses
to the Active Duty Questionnaire by Rank
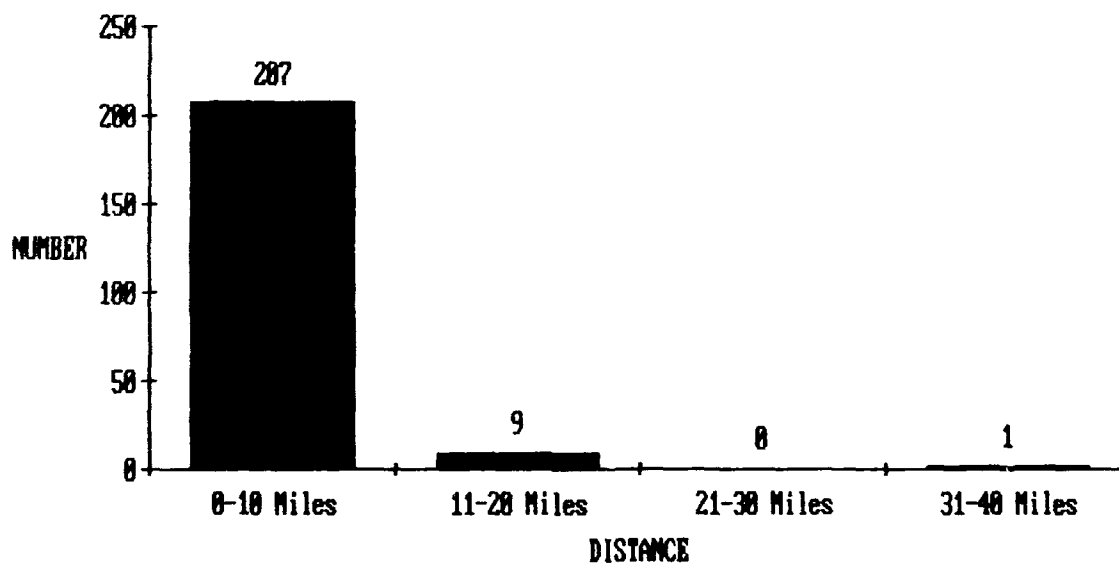
Figure 3. Distribution of Respondents to the Active
Duty Questionnaire by Distance from MACH

The distribution of respondents by number of family members is shown in Figure 4. The mean number of family members for the respondents was 2.63, with a standard deviation of 1.09, and a range of one to six. The modal number of family members was three, which was reported by 83 (38.2%) of the respondents.
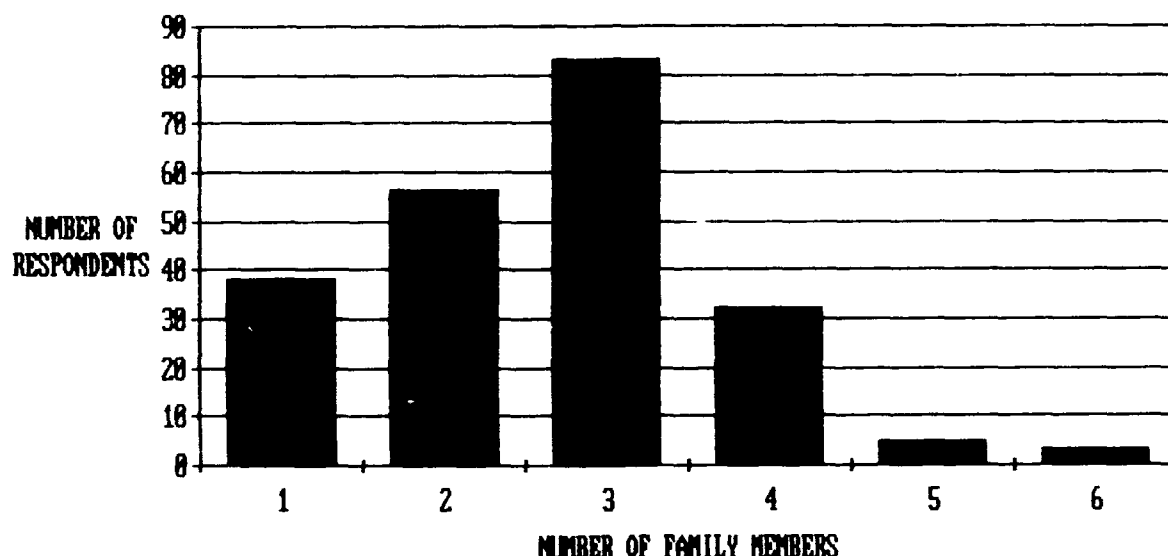
Figure 4. Distribution of Respondents to the Active Duty Questionnaire by Number of Family Members

The distribution of respondents by DEERS registration is shown in Figure 5. When asked if their family members were registered on the Defense Enrollment Eligibility Reporting System (DEERS), 191 (88%) respondents indicated their family members were registered, nine (4.1%) indicated their family members were not registered, 14 (6.5) indicated they did not know whether or not their family members were registered, and three (1.4%) failed to provide any responses at all to the question.

The total family income reported by the respondents for the last calendar year covered a range from #4,000.00 to #54,000.00. The mean value reported was #21,196.81, with a standard deviation of #9,919.00. The median value was #20,000.00, and the modal value was shared between #13,000.00 and #20,000.00, with 14 respondents reporting each. A total of 29 (13.4%) of the respondents failed to provide their income.
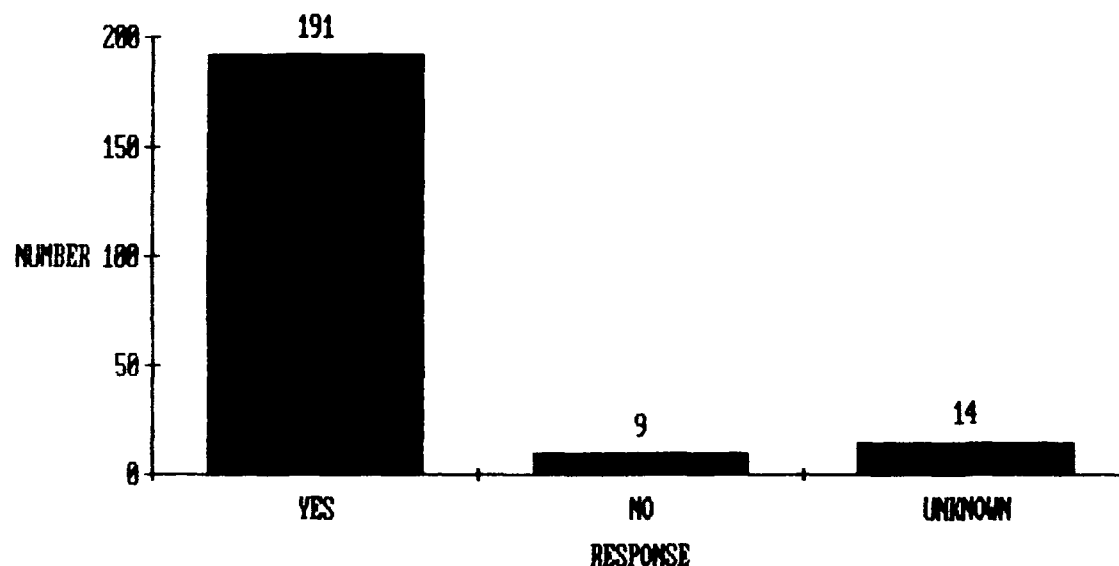
Figure 5. Distribution of Respondents to the Active Duty Questionnaire by DEERS Registration

The responses of the 188 individuals that indicated their total family income were collapsed into a distribution by income level, as shown in Figure 6. Of the 188 respondents, 56 (29.8%) reported an income less than #15,000.00, 93 (49.5%) reported and income between #15,000.00 and #29,999.99, and 39 (20.7%) reported an income greater than #30,000.
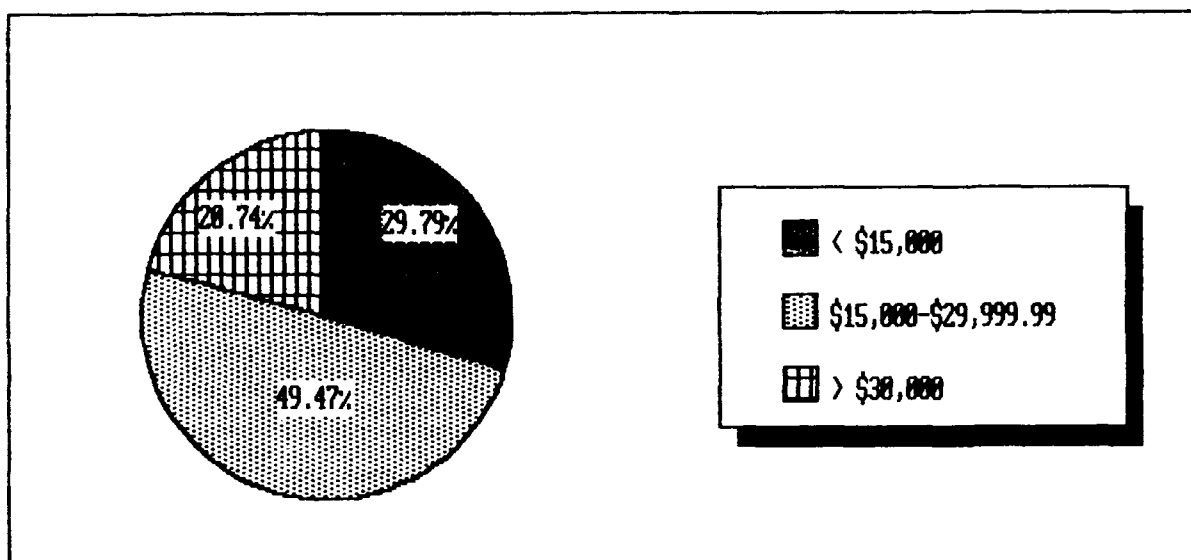
<u>Figure 6</u>. Distribution of Respondents to the Active
Duty Questionnaire by Annual Family Income

The distribution of respondents with some type of private
health insurance is shown in Figure 7-1. When asked if their
family members were currently covered by some type of private
health insurance, 19.35% (n=42) indicated their family members
had some type of coverage, 9.22% (n=20) indicated their family
members had no coverage, and 71.43% (n=155) failed to provide any
response to the question.

The responses of the 42 individuals that indicated their
family members did have coverage were further collapsed into a
distribution by type of coverage, as shown in Figure 7-2. Of the
42 respondents that indicated they had some type of personal
health insurance for their family members, 30.95% (n=13)
indicated supplemental coverage only, 21.43%(n=9) indicated
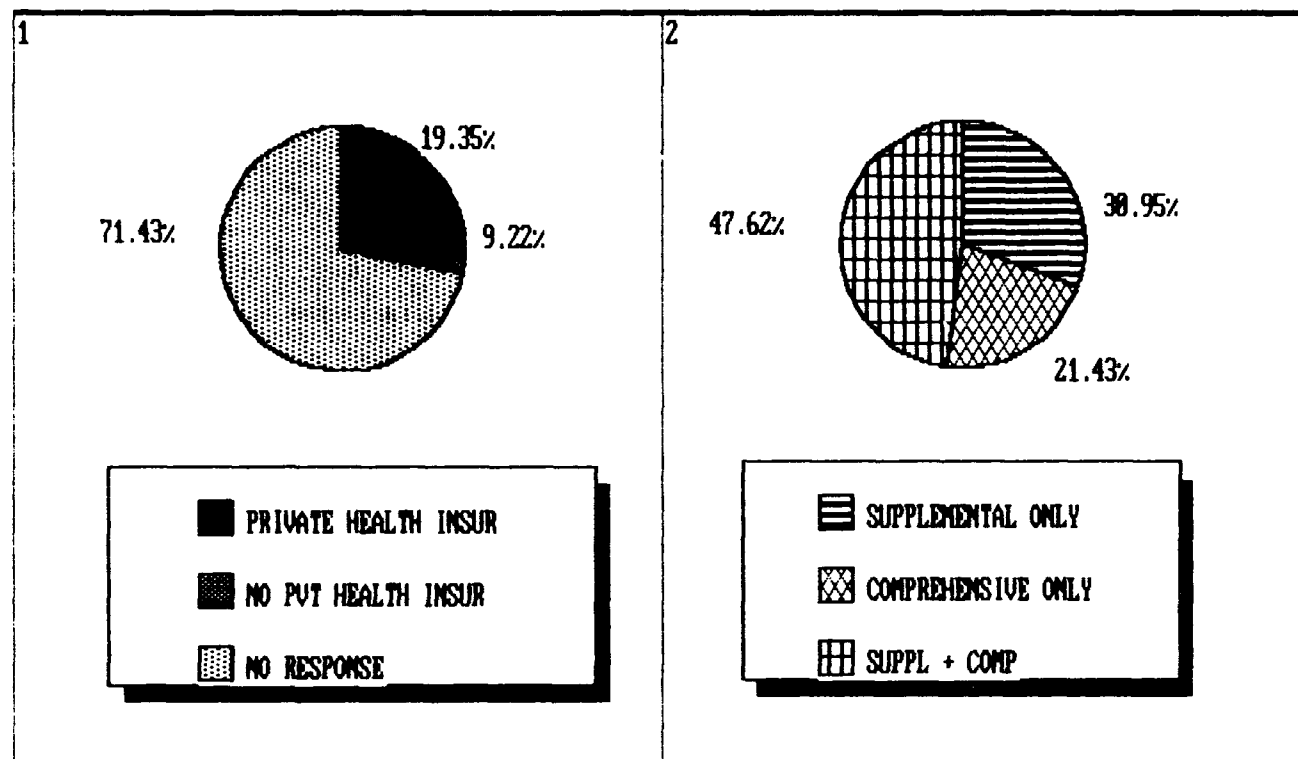
Figure 7. Distribution of Respondents to the Active
Duty Questionnaire with Private Health Insurance

comprehensive coverage only, and 47.62% (n=20) indicated both

supplemental and comprehensive coverage.

Section II: Family Member Healthcare

The distribution of 249 responses[3] to the question of how

often active duty family members went to MACH, a private

physician, or another healthcare source not listed for outpatient

care during the past two years is shown in Figure 8. As shown, a

total of 39.76% (n=99) indicated they used MACH for their

outpatient needs 'all of the time,' 16.04% (n=40) indicated they

used MACH 'most of the time,' 3.61% (n=9) indicated they used

MACH about "half of the time," and 10.84% (n=27) indicated they
only used MACH a "little of the time." By comparison, a total of
2.41% (n=6) indicated they used a private physician for their
outpatient needs "all of the time," 5.62% (n=14) indicated they
used a private physician "most of the time," 2.41% (n=6)
indicated they used a private physician about "half of the time,"
and 10.44% (n=26) indicated they only used a private physician a
"little of the time." Finally, a total of 3.61% (n=9) indicated
they used another healthcare source not listed for their
outpatient needs "all of the time," 0.8% (n=2) indicated they
used another healthcare source "most of the time," 0.8% (n=2)
indicated they used another healthcare source about "half of the
time," and 3.61% (n=9) indicated they only used another
healthcare source a "little of the time."

Figure 8. Distribution of Respondents to the Active
Duty Questionnaire by Location of Outpatient Care

The distribution of 136 responses to the question of how often active duty family members paid for outpatient visits to physicians at locations other than MACH using personal money without reimbursement, CHAMPUS, Medicare, or private health insurance is shown in Figure 9. As shown, a total of 28.68% (n=39) indicated they used personal money without reimbursement "all of the time," 3.68% (n=5) indicated they used personal money without reimbursement "most of the time," 2.94% (n=4) indicated they used personal money without reimbursement about "half of the time," and 10.29% (n=14) indicated they only used personal money without reimbursement a "little of the time." A total of 17.65% (n=24) indicated they used CHAMPUS "all of the time," 11.77% (n=16) indicated they used CHAMPUS "most of the time," 3.68% (n=5) indicated they used CHAMPUS about "half of the time," and 10.29% (n=14) indicated they only used CHAMPUS a "little of the time." Not surprising, very few of the active duty respondents indicated that any of their family members used Medicare to pay for outpatient healthcare[4]. None of the respondents indicated their family members used Medicare "all of the time," 1.47% (n=2) indicated they used Medicare "most of the time," none indicated they used Medicare about "half of the time," and 0.74% (n=1) indicated they only used Medicare a "little of the time." Finally, a total of 2.21% (n=3) indicated they used private health insurance "all of the time," 1.47% (n=2) indicated they used private health insurance "most of the time," 0.74% (n=1) indicated they used private health insurance about "half of the

Figure 9. Distribution of Respondents to the Active Duty
Questionnaire by Payment Method for Outpatient Care

time," and 2.21% (n=3) indicated they only used private health

insurance a "little of the time."

The distribution of 139 responses to the question of how

often active duty family members went to MACH, a private

hospital, or another healthcare source not listed for inpatient

care during the past two years is shown in Figure 10. As shown,

a total of 59.71% (n=83) indicated they used MACH for their

inpatient healthcare needs "all of the time," 7.19% (n=10)

indicated they used MACH "most of the time," 5.04% (n=7)

indicated they used MACH about "half of the time," and 7.19%

(n=10) indicated they only used MACH a "little of the time." By

comparison, a total of 7.19% (n=10) indicated they used a private

hospital for their inpatient needs "all of the time," 2.16% (n=3)

indicated they used a private hospital "most of the time," 2.16%

(n=3) indicated they used a private hospital about 'half of the time,' and 5.36% (n=7) indicated they only used a private hospital a 'little of the time.' Finally, a total of 1.44% (n=2) indicated they used another healthcare source not listed for their inpatient needs 'all of the time,' 1.44% (n=2) indicated they used another healthcare source 'most of the time,' none indicated they used another healthcare source about 'half of the time,' and 1.44% (n=2) indicated they only used another healthcare source a 'little of the time.'

Figure 10. Distribution of Respondents to the Active Duty Questionnaire by Location of Inpatient Care

The distribution of 75 responses to the question of how often active duty family members paid for inpatient stays at hospitals other than MACH using personal money without reimbursement, CHAMPUS, Medicare, or private health insurance is shown in Figure 11. As shown, a total of 13.33% (n=10) indicated

they used personal money without reimbursement "all of the time,"
5.33% (n=4) indicated they used personal money without
reimbursement "most of the time," 4% (n=3) indicated they used
personal money without reimbursement about "half of the time,"
and 10.67% (n=8) indicated they only used personal money without
reimbursement a "little of the time." A total of 28% (n=21)
indicated they used CHAMPUS "all of the time," 12% (n=9)
indicated they used CHAMPUS "most of the time," 8% (n=6)
indicated they used CHAMPUS about "half of the time," and 6.67%
(n=5) indicated they only used CHAMPUS a "little of the time."
As was the case with outpatient care, it is not surprising that
very few of the active duty respondents indicated their family
members used Medicare to pay for inpatient healthcare. None of
the respondents indicated their family members used Medicare "all
of the time," 2.67% (n=2) indicated they used Medicare "most of
the time," none indicated they used Medicare about "half of the
time," and 1.33% (n=1) indicated they only used Medicare a
"little of the time." Finally, a total of 1.33% (n=1) indicated
they used private health insurance "all of the time," 2.67% (n=2)
indicated they used private health insurance "most of the time,"
1.33% (n=1) indicated they used private health insurance about
"half of the time," and 2.67% (n=2) indicated they only used
private health insurance a "little of the time."

A copy of the descriptive statistics and frequency
distributions calculated by SPSS/PC+ software for the active duty
questionnaire is attached as Appendix O.
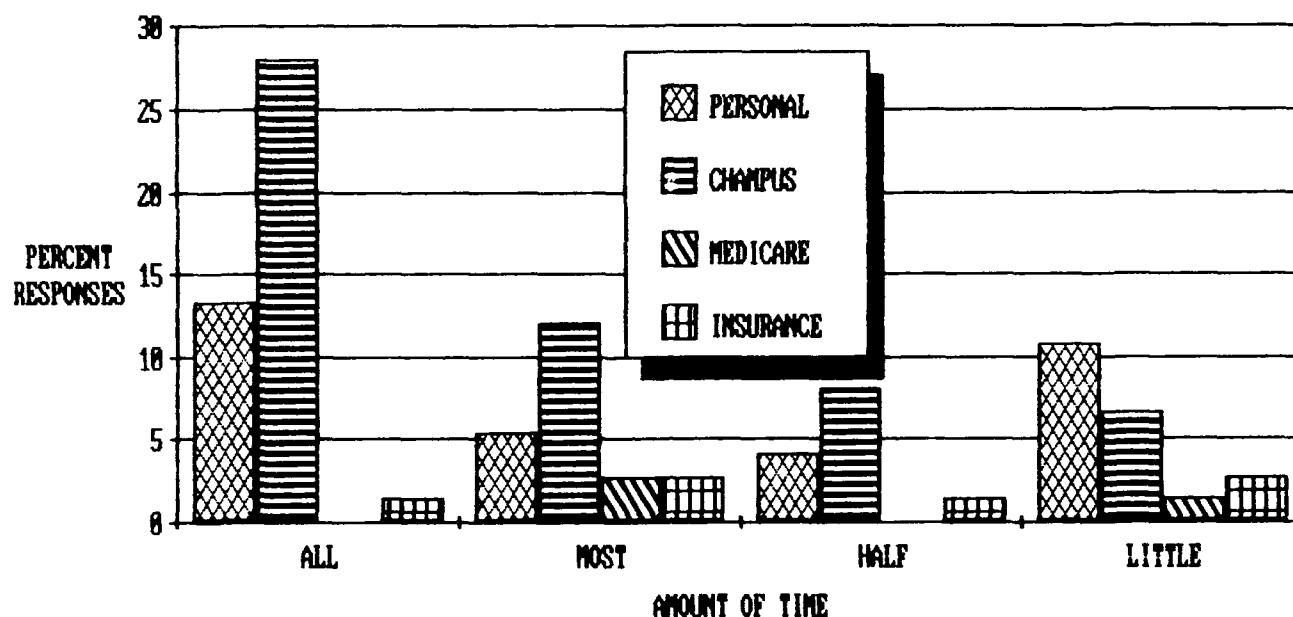
Figure 11. Distribution of Respondents to the Active Duty
Questionnaire by Payment Method for Inpatient Care

Retiree Questionnaire

Section I: Demographic Information

The retiree questionnaire was administered to a random
sample of 934 retirees or surviving spouses of retirees listed on
the 5 February 1988 listing of the "Retired Army Personnel
Roster-By Zip Code." A total of 477 completed questionnaires
were returned, for a response rate of 51.07%. This response
rate did not meet the desired response rate of 60%.

Of the 432 completed questionnaires returned, a total of 38
were excluded from the analysis. Of the 38 excluded, 34 were

excluded because they were improperly completed, and the remaining four were excluded because the respondent either omitted the zip code for his local residence, or listed a zip code outside of the MACH CHAMPUS catchment area. Thus, of the 470 completed questionnaires received, only 439 (47%) were actually coded and entered into the database for analysis.

Although not included in the active duty questionnaire, the retiree questionnaire asked respondents to provide their age. It was hoped that this would give some indication of the average age of the retiree population residing within the MACH CHAMPUS catchment area, which could possibly have use in determining potential healthcare needs in the future. The distribution of retirees by age is shown in Figure 12. The mean age of respondents to the retiree questionnaire was 59.77 years, with a standard deviation of 9.03 years. The median age was 60, and the modal age was tied between 59 years (n=23) and 65 years (n=23). The range of reported ages varied from 28 years (n=1) to 83 years (n=2). Only five (1.1%) of the respondents did not provide their age on the completed questionnaire.

The responses of the 434 individuals that provided their age on the returned questionnaire were collapsed into a distribution of year groups with 10 year class intervals, as shown in Figure 12. Of the 434 respondents, six (1.38%) reported an age less than 40 years, 47 (10.83%) reported an age between 40-49 years, 160 (36.87%) reported an age between 50-59 years, 160 (36.87%) reported an age between 60-69 years, 56 (12.9%) reported an age
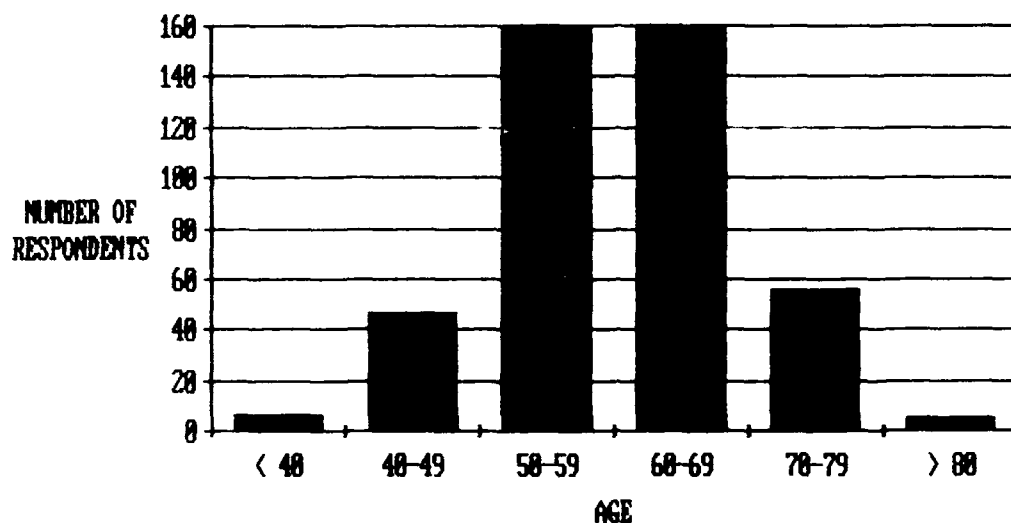
Figure 12. Distribution of Respondents
to the Retiree Questionnaire by Age

between 70-79 years, and five (1.15%) reported an age greater
than 80 years.

The distribution of respondents by retired rank is shown in
Figure 13. The modal retired rank was E7-E9, which accounted for
217 (49.4%) of the responses, followed by E5-E6 with 91 (20.7%)
responses, and 04-05 with 50 (11.4%) responses. A total of 44
(9.6%) of the respondents indicated that the retired service
member was deceased. Each of the remaining categories of rank
accounted for less than 5% of the responses, respectively. Only
two (0.5%) of the respondents did not provide any response
regarding their retired rank on the completed questionnaires.

The modal local address zip code reported by respondents was
31907, Columbus, Georgia, which accounted for 132 (30.1%) of the
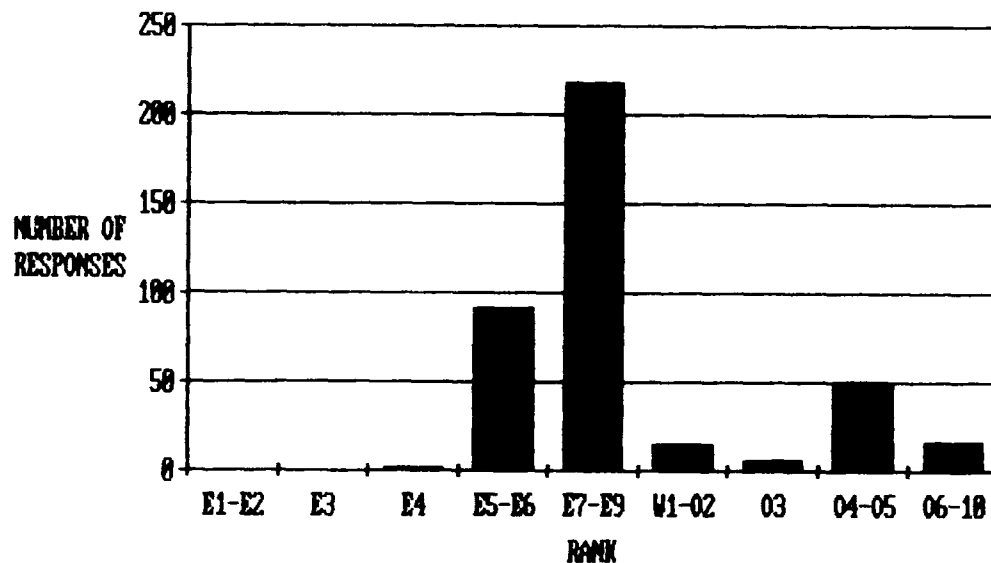
Figure 13. Distribution of Respondents
to the Retiree Questionnaire by Rank

responses. Cumulatively, the zip codes for Columbus, Georgia, and Phenix City, Alabama, both located within 10 miles of MACH, accounted for 361 (82.23%) of the responses. This is demonstrated in Figure 14, which is a distribution of respondents by zip codes that has been collapsed into four groups, based upon the straight line distance of the reported zip code from MACH. As shown, 364 (82.9%) of the respondents indicated that they live within 10 miles of MACH, 33 (7.5%) live between 11-20 miles of MACH, 18 (4.1%) live between 21-30 miles of MACH, and 24 (5.5%) live between 31-40 miles of MACH.

At first appearance, Figure 14 seems to suggest that those retirees who live closer to MACH had a significantly higher response rate than those who live further away. To examine this
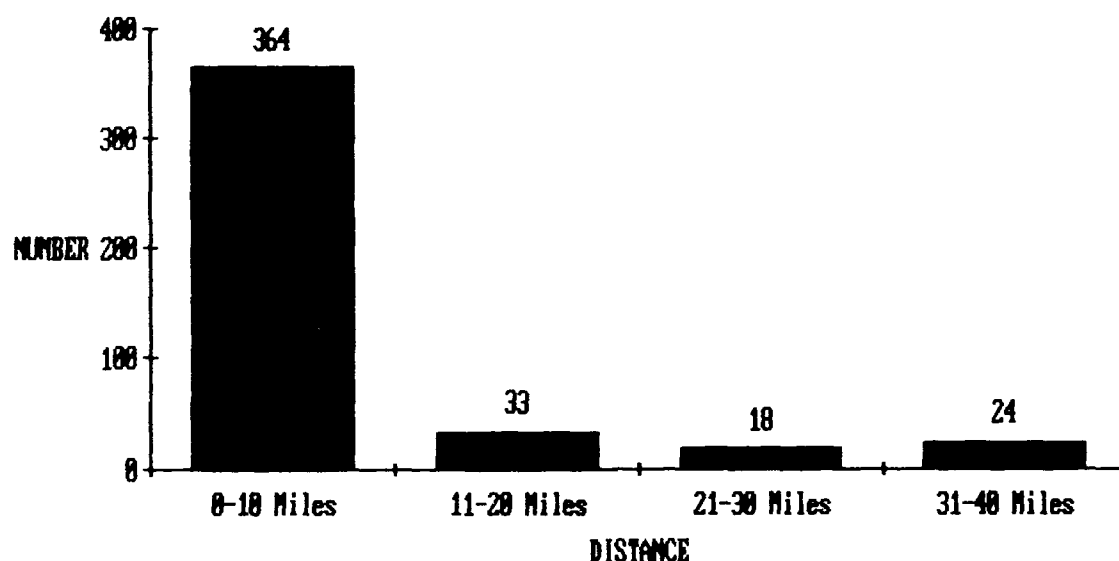
Figure 14. Distribution of Respondents to the
Retiree Questionnaire by Distance from MACH

possibility further, the collapsed distribution of zip codes was
converted to a percentage, and compared to the expected response
rate° for each group. The results, shown in Figure 15, clearly
demonstrate that this was not the case. For the zip codes in
each group, the actual response rate is virtually equal to the
expected response rate.

The distribution of respondents by number of family members
is shown in Figure 16. The mean number of family members for the
respondents to the retiree questionnaire was 1.71, with a
standard deviation of 1.12, and a range of one to eight. The
modal number of family members was one, which was reported by 225
(51.3%) of the respondents. A total of 50 (11.4%) respondents
reported that they had no family members residing within the MACH
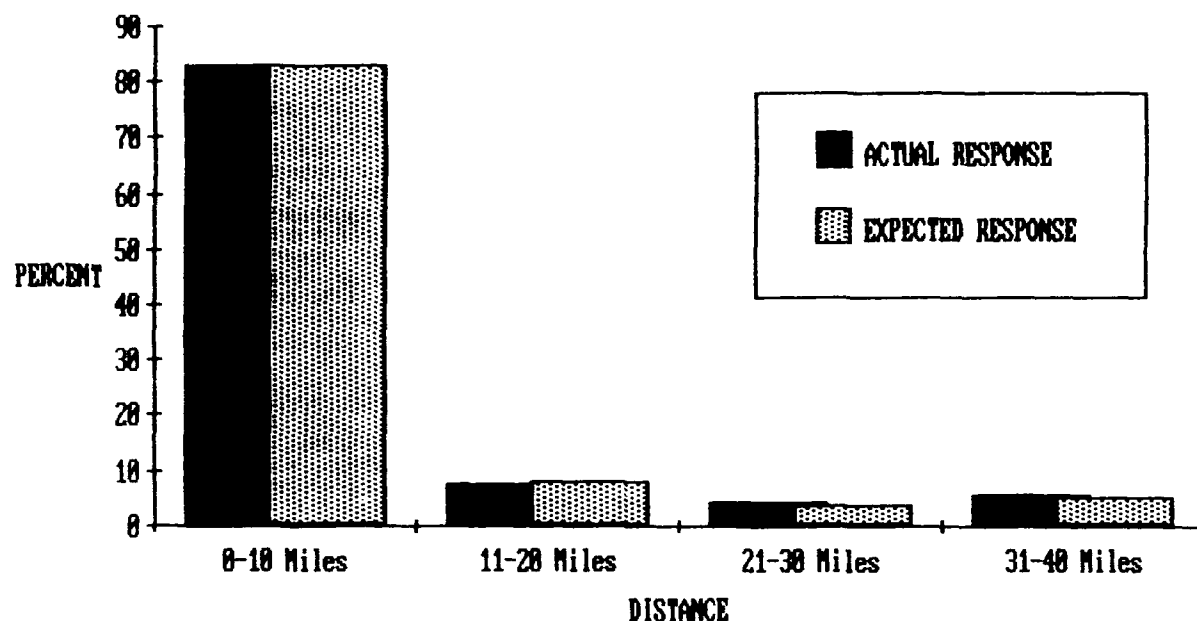
Figure 15. Distribution of Expected vs Actual Responses
to the Retiree Questionnaire by Distance from MACH
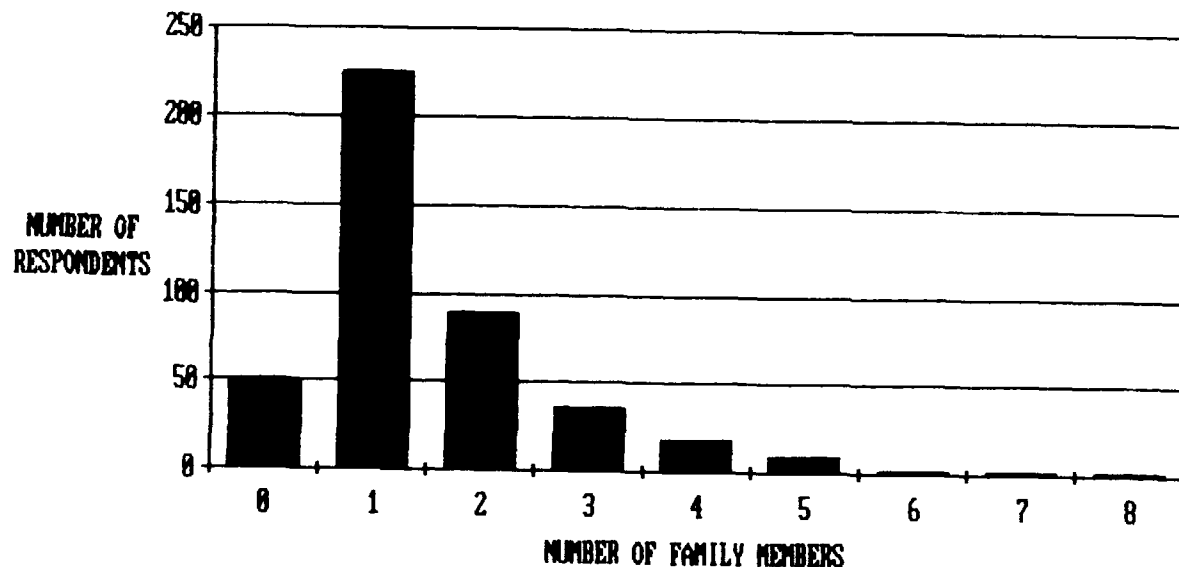
Figure 16. Distribution of Respondents to the Retiree
Questionnaire by Number of Family Members

CHAMPUS catchment area, and nine (2.1%) failed to provide a response to the question.

The distribution of respondents by DEERS registration is shown in Figure 17. When asked if their family members were registered on the Defense Enrollment Eligibility Reporting System (DEERS), 370 (84.3%) respondents indicated their family members were registered, 43 (9.8%) indicated their family members were not registered, 13 (3%) indicated they did not know whether or not their family members were registered, and 13 (3%) failed to provide any response to the question.

The total family income reported by the respondents for the last calendar year covered a range from #4,000.00 to #200,000.00. The mean value reported was #27,954.90, with a standard deviation of #18,634.04. The median value was #24,000.00, and the modal value, reported by 28 (6.4%) of the respondents, was #30,000.00. A total of 47 (10.7%) of the respondents failed to provide their income on their completed questionnaire.

The responses of the 392 individuals that indicated their total family income were collapsed into the same distribution by income level that was used for the active duty questionnaire, as shown in Figure 18. Of the 392 respondents, 78 (19.9%) reported an income less than #15,000.00, 167 (42.6%) reported and income between #15,000.00 and #29,999.99, and 147 (37.5%) reported an income greater than #30,000.
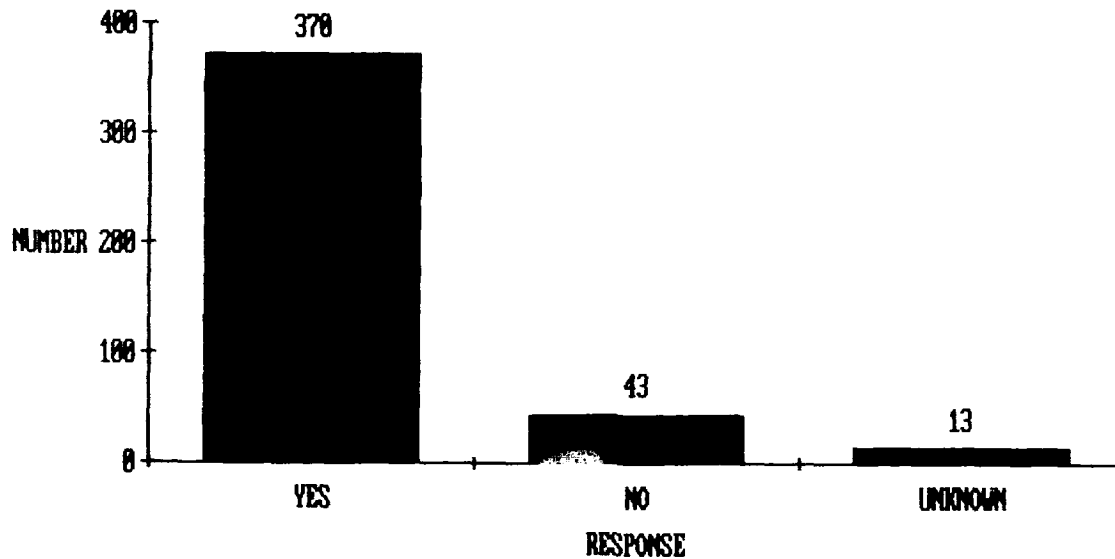
Figure 17. Distribution of Respondents to the Retiree Questionnaire by DEERS Registration
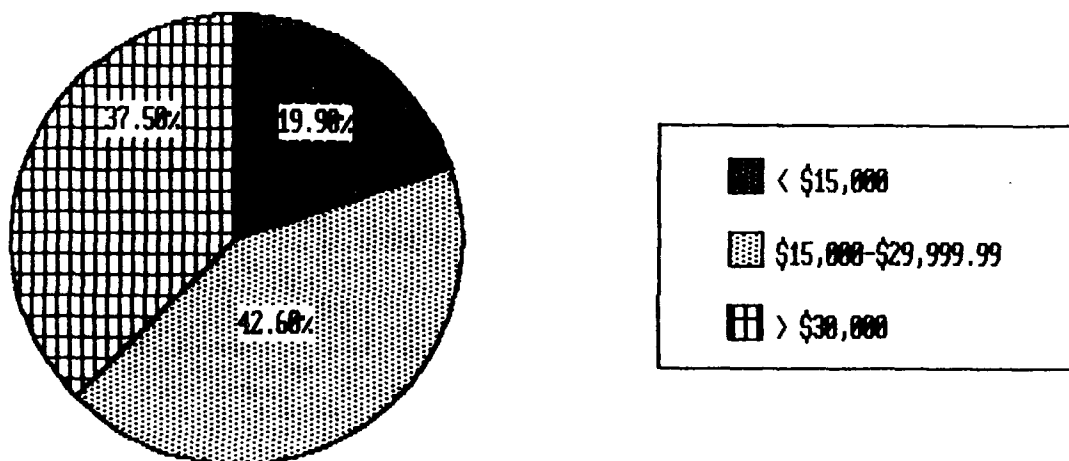
Figure 18. Distribution of Respondents to the Retiree Questionnaire by Annual Family Income
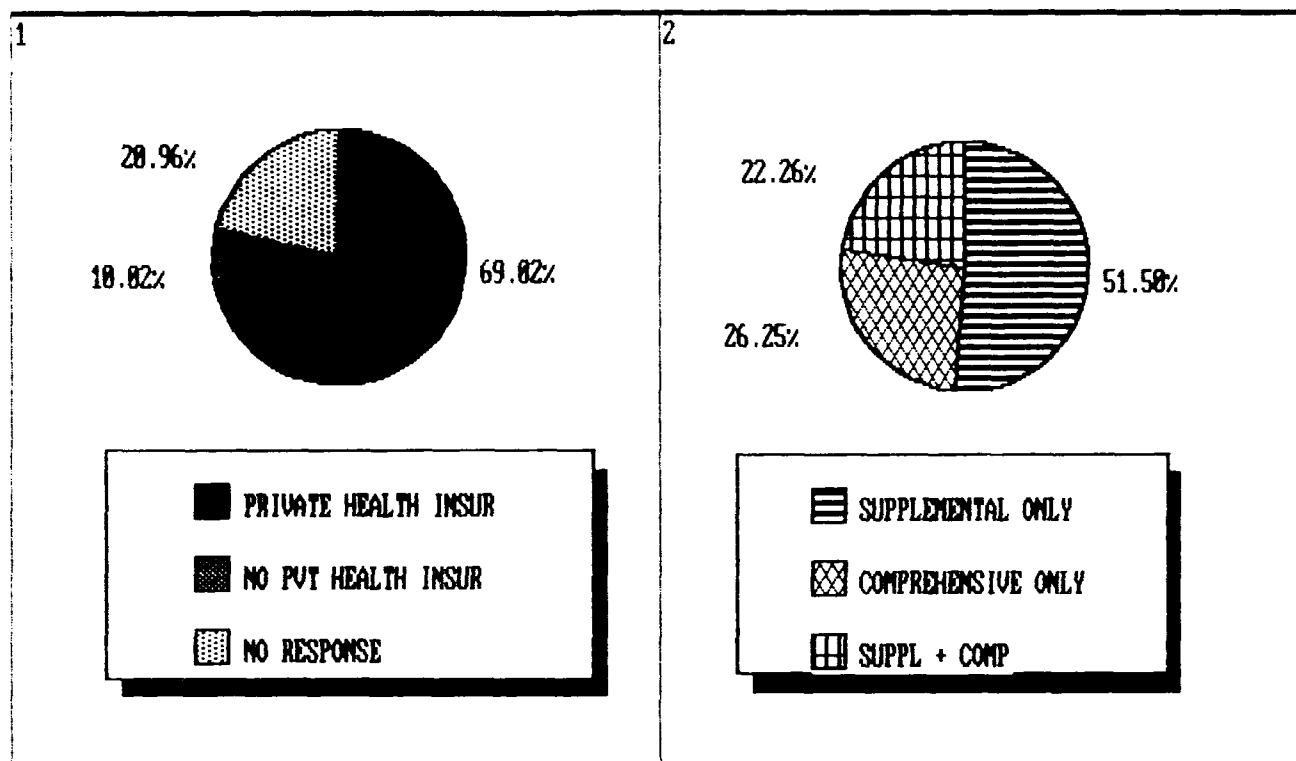
Figure 19. Distribution of Respondents to the Retiree
Questionnaire with Private Health Insurance

The distribution of respondents with some type of private
health insurance is shown in Figure 19-1. When asked if their
family members were currently covered by some type of private
health insurance, 69.02% (n=303) indicated their family members
had some type of coverage, 10.02% (n=44) indicated their family
members had no coverage, and 20.96% (n=92) failed to provide any
response to the question.

The responses of the 303 individuals that indicated their
family members did have coverage were further collapsed into a
distribution by type of coverage, as shown in Figure 19-2. Of

the 298 respondents that indicated they had some type of private health insurance, 51.16% (n=155) indicated supplemental coverage only, 26.07% (n=79) indicated comprehensive coverage only, 22.11% (n=67) indicated both supplemental and comprehensive coverage, and 0.66% (n=2) failed to specify any particular type of private health insurance*.

Section II: Retiree Healthcare

The distribution of 471 responses to the question of how often the retiree completing the questionnaire went to MACH, a private physician, or another healthcare source not listed for outpatient care during the past two years is shown in Figure 20. As shown, a total of 45.65 % (n=215) indicated they used MACH for their outpatient needs 'all of the time,' 9.13% (n=43) indicated they used MACH 'most of the time,' 3.18% (n=15) indicated they used MACH about 'half of the time,' and 7.01% (n=33) indicated they only used MACH a 'little of the time.' By comparison, a total of 12.95% (n=61) indicated they used a private physician for their outpatient needs 'all of the time,' 7.22% (n=34) indicated they used a private physician 'most of the time,' 3.4% (n=16) indicated they used a private physician about 'half of the time,' and 8.28% (n=39) indicated they only used a private physician a 'little of the time.' Finally, a total of 1.06% (n=5) indicated they used another healthcare source not listed for their outpatient needs 'all of the time,' 0.21% (n=1) indicated they used another healthcare source 'most of the time,' 0.42% (n=2) indicated they used another healthcare source about

'half of the time,' and 1.49% (n=7) indicated they only used another healthcare source a 'little of the time.'

The distribution of 313 responses to the question of how often retirees paid for outpatient visits to physicians at locations other than MACH using personal money without reimbursement, CHAMPUS, Medicare, or private health insurance is shown in Figure 21. As shown, a total of 20.13% (n=63) indicated they used personal money without reimbursement 'all of the time,' 6.39% (n=20) indicated they used personal money without reimbursement 'most of the time,' 4.15% (n=13) indicated they used personal money without reimbursement about 'half of the time,' and 6.71% (n=21) indicated they only used personal money without reimbursement a 'little of the time.' A total of 9.58% (n=30) indicated they used CHAMPUS 'all of the time,' 5.11% (n=16) indicated they used CHAMPUS 'most of the time,' 2.56% (n=8) indicated they used CHAMPUS about 'half of the time,' and 6.71% (n=21) indicated they only used CHAMPUS a 'little of the time.' A total of 6.39% (n=20) of the respondents indicated they used Medicare 'all of the time,' 1.92% (n=6) indicated they used Medicare 'most of the time,' 1.6% (n=5) indicated they used Medicare about 'half of the time,' and 2.88% (n=9) indicated they only used Medicare a 'little of the time.' Finally, a total of 12.78% (n=40) indicated they used private health insurance 'all of the time,' 5.75% (n=18) indicated they used private health insurance 'most of the time,' 3.19% (n=10) indicated they used private health insurance about 'half of the time,' and 4.15%
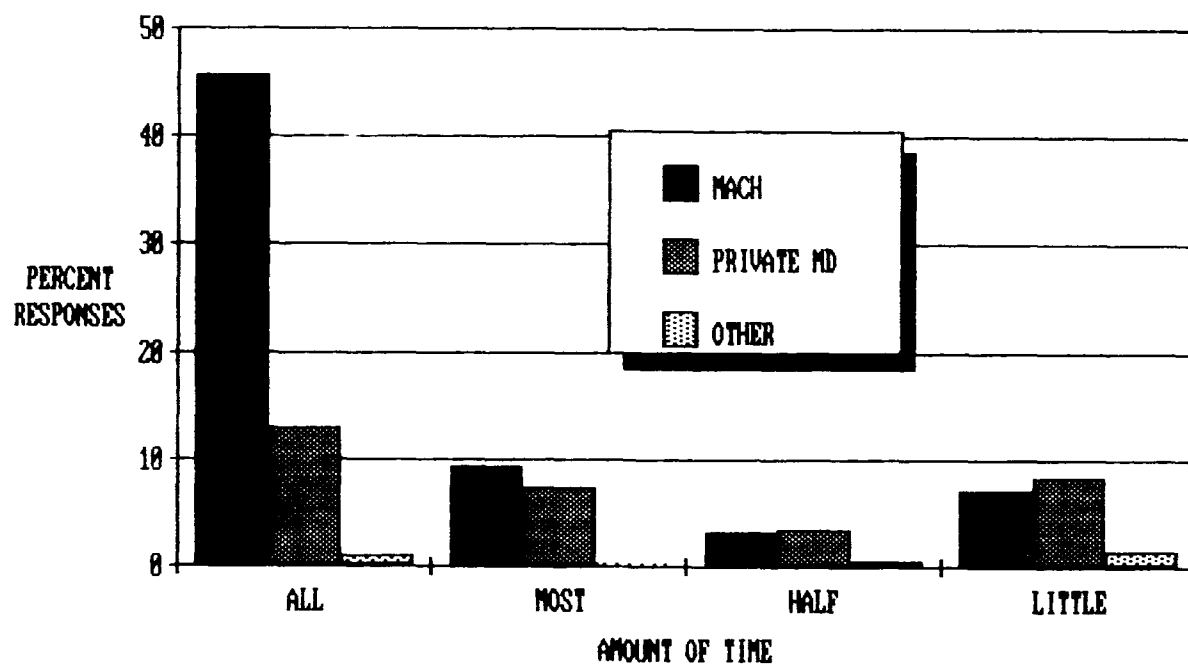
Figure 20. Distribution of Retiree Responses to the Retiree Questionnaire by Location of Outpatient Care
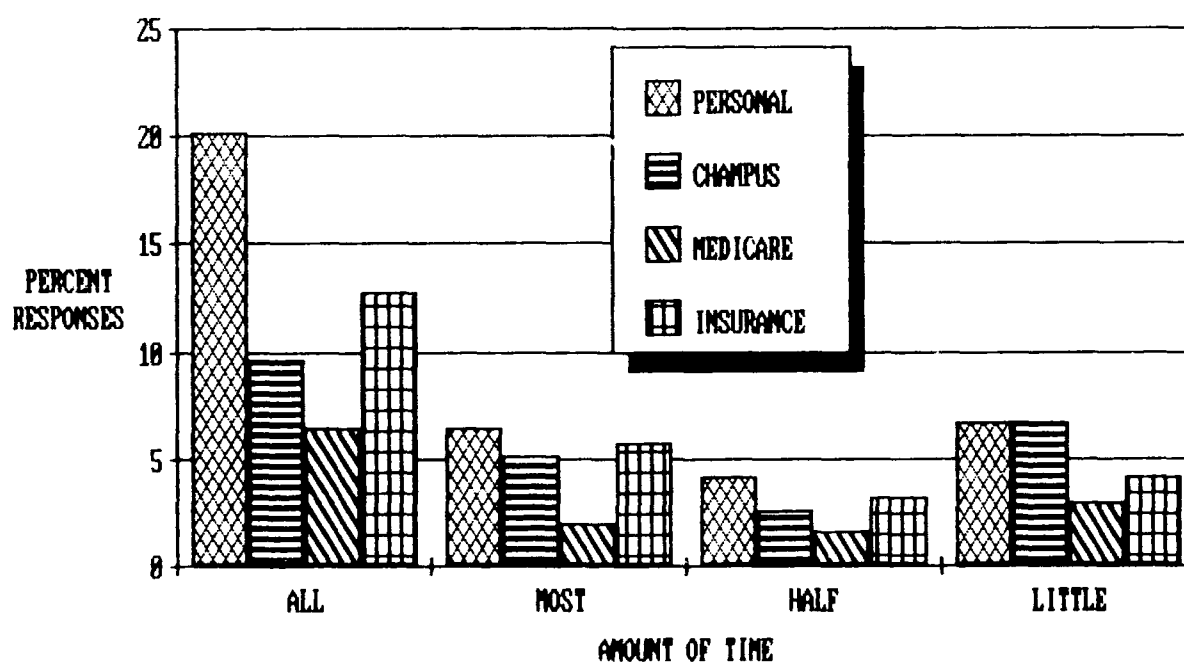
Figure 21. Distribution of Retiree Responses to the Retiree Questionnaire by Payment Method for Outpatient Care

(n=13) indicated they only used private health insurance a "little of the time."

The distribution of 216 responses to the question of how often the retiree completing the questionnaire went to MACH, a private hospital, or another healthcare source not listed for inpatient care during the past two years is shown in Figure 22. As shown, a total of 51.39% (n=111) indicated they used MACH for their inpatient healthcare needs "all of the time," 5.56% (n=12) indicated they used MACH "most of the time," 2.78% (n=6) indicated they used MACH about "half of the time," and 1.85% (n=4) indicated they only used MACH a "little of the time." By comparison, a total of 27.31% (n=59) indicated they used a private hospital for their inpatient needs "all of the time," 2.31% (n=5) indicated they used a private hospital "most of the time," 2.31% (n=5) indicated they used a private hospital about "half of the time," and 3.24% (n=7) indicated they only used a private hospital a "little of the time." Finally, a total of 2.31% (n=5) indicated they used another healthcare source not listed for their inpatient needs "all of the time," none indicated they used another healthcare source "most of the time," 0.46% (n=1) indicated they used another healthcare source about "half of the time," and 0.46% (n=1) indicated they only used another healthcare source a "little of the time."
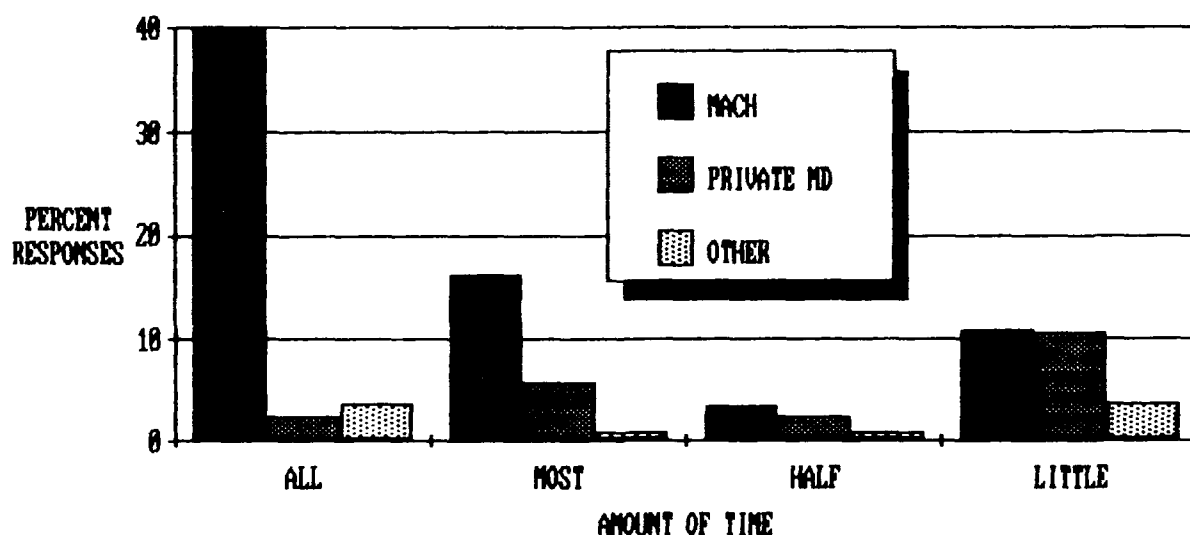
The distribution of 170 responses to the question of how often the retiree paid for inpatient stays at a hospital other than MACH using personal money without reimbursement, CHAMPUS,

Medicare, or private health insurance is shown in Figure 23. As shown, a total of 6.47% (n=11) indicated they used personal money without reimbursement 'all of the time,' 2.94% (n=5) indicated they used personal money without reimbursement 'most of the time,' 0.59% (n=1) indicated they used personal money without reimbursement about 'half of the time,' and 7.65% (n=13) indicated they only used personal money without reimbursement a 'little of the time.' A total of 17.65% (n=30) indicated they used CHAMPUS 'all of the time,' 4.12% (n=7) indicated they used CHAMPUS 'most of the time,' 1.18% (n=2) indicated they used CHAMPUS about 'half of the time,' and 7.06% (n=12) indicated they only used CHAMPUS a 'little of the time.' A total of 11.18% (n=19) of the respondents indicated they used Medicare 'all of the time,' 2.35% (n=4) indicated they used Medicare 'most of the time,' 1.18% (n=2) indicated they used Medicare about 'half of the time,' and 2.94% (n=5) indicated they only used Medicare a 'little of the time.' Finally, a total of 25.88% (n=44) indicated they used private health insurance 'all of the time,' 4.71% (n=8) indicated they used private health insurance 'most of the time,' 1.76% (n=3) indicated they used private health insurance about 'half of the time,' and 2.35% (n=4) indicated they only used private health insurance a 'little of the time.'

Section III: Retiree Family Member Healthcare

The distribution of 475 responses to the question of how often retiree family members went to MACH, a private physician, or another healthcare source not listed for outpatient care
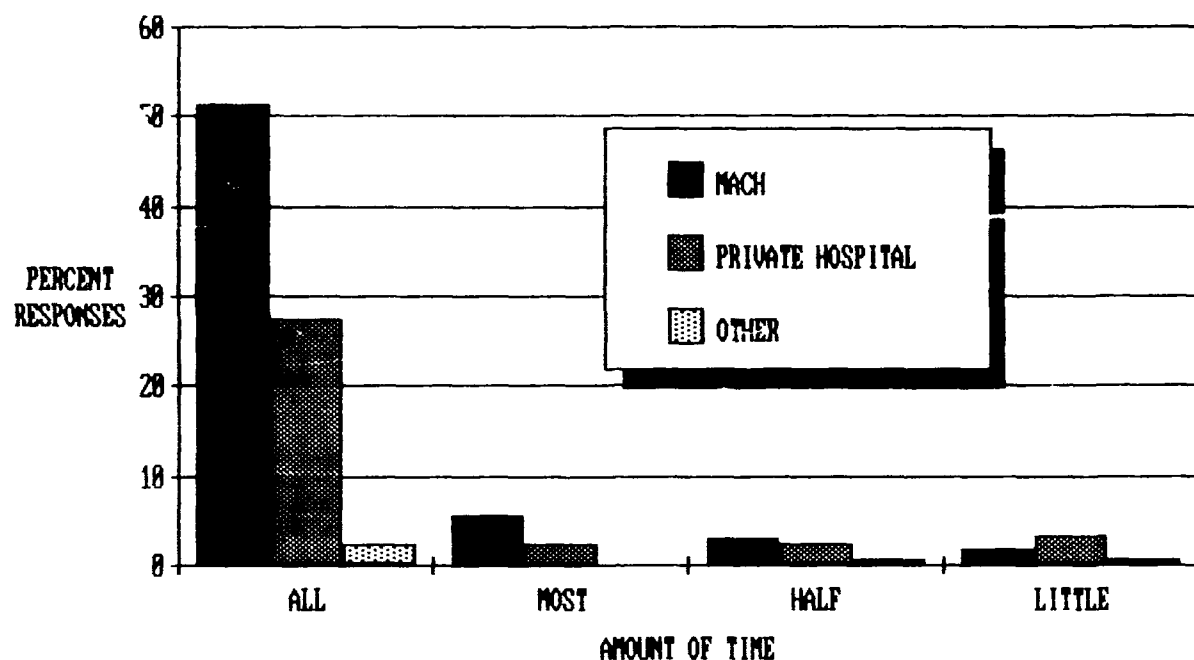
Figure 22. Distribution of Retiree Responses to the
Retiree Questionnaire by Location of Inpatient Care
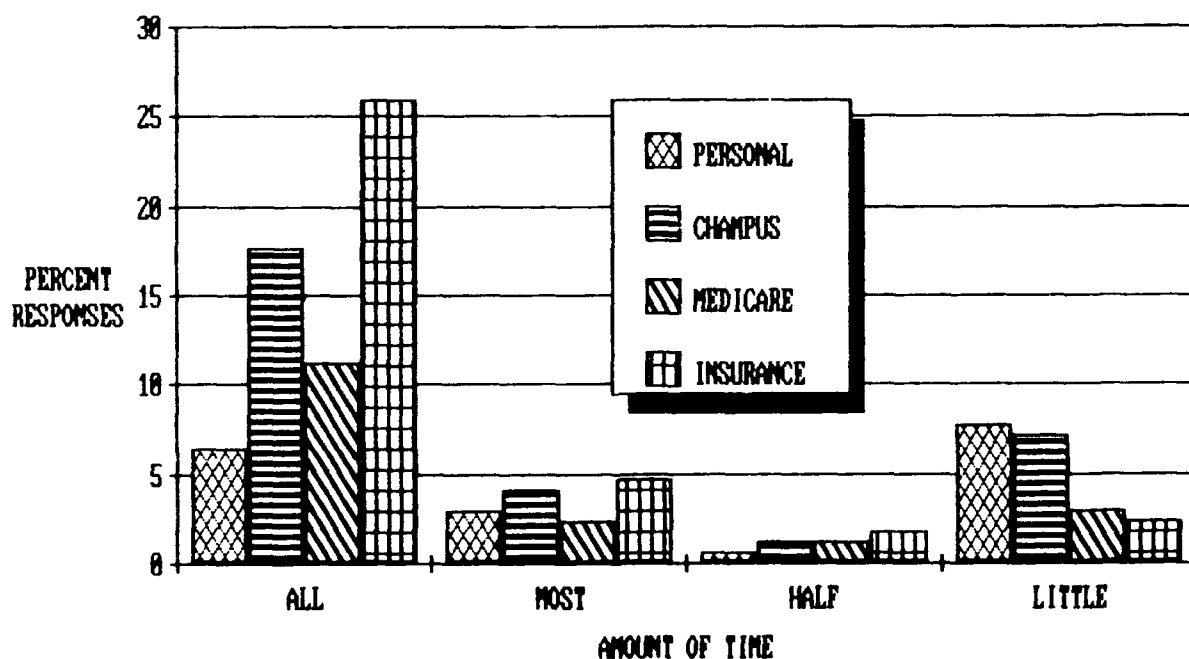
Figure 23. Distribution of Retiree Responses to the Retiree
Questionnaire by Payment Method for Inpatient Care

during the past two years is shown in Figure 24. As shown, a total of 37.47% (n=178) indicated they used MACH for their outpatient needs "all of the time," 13.25% (n=63) indicated they used MACH "most of the time," 4.21% (n=20) indicated they used MACH about "half of the time," and 5.68% (n=27) indicated they only used MACH a "little of the time." By comparison, a total of 19.16% (n=91) indicated they used a private physician for their outpatient needs "all of the time." 6.74% (n=32) indicated they used a private physician "most of the time," 5.05% (n=24) indicated they used a private physician about "half of the time," and 7.16% (n=34) indicated they only used a private physician a "little of the time." Finally, a total of 0.42% (n=2) indicated they used another healthcare source not listed for their outpatient needs "all of the time," none indicated they used another healthcare source "most of the time," 0.42% (n=2) indicated they used another healthcare source about "half of the time," and 0.42% (n=2) indicated they only used another healthcare source a "little of the time."

The distribution of 365 responses to the question of how often retiree family members paid "or outpatient visits to physicians at locations other than MACH using personal money without reimbursement, CHAMPUS, Medicare, or private health insurance is shown in Figure 25. As shown, a total of 21.64% (n=79) indicated they used personal money without reimbursement "all of the time," 6.58% (n=24) indicated they used personal money without reimbursement "most of the time," 6.03% (n=22)

indicated they used personal money without reimbursement about "half of the time," and 6.03% (n=22) indicated they only used personal money without reimbursement a "little of the time." A total of 9.59% (n=35) indicated they used CHAMPUS "all of the time," 4.11% (n=15) indicated they used CHAMPUS "most of the time," 4.11% (n=15) indicated they used CHAMPUS about "half of the time," and 6.03% (n=22) indicated they only used CHAMPUS a "little of the time." 5.48% (n=20) of the respondents indicated their family members used Medicare "all of the time," 2.47% (n=9) indicated they used Medicare "most of the time," 1.37% (n=5) indicated they used Medicare about "half of the time," and 1.64% (n=6) indicated they only used Medicare a "little of the time." Finally, a total of 12.05% (n=44) indicated they used private health insurance "all of the time," 5.21% (n=19) indicated they used private health insurance "most of the time," 3.56% (n=13) indi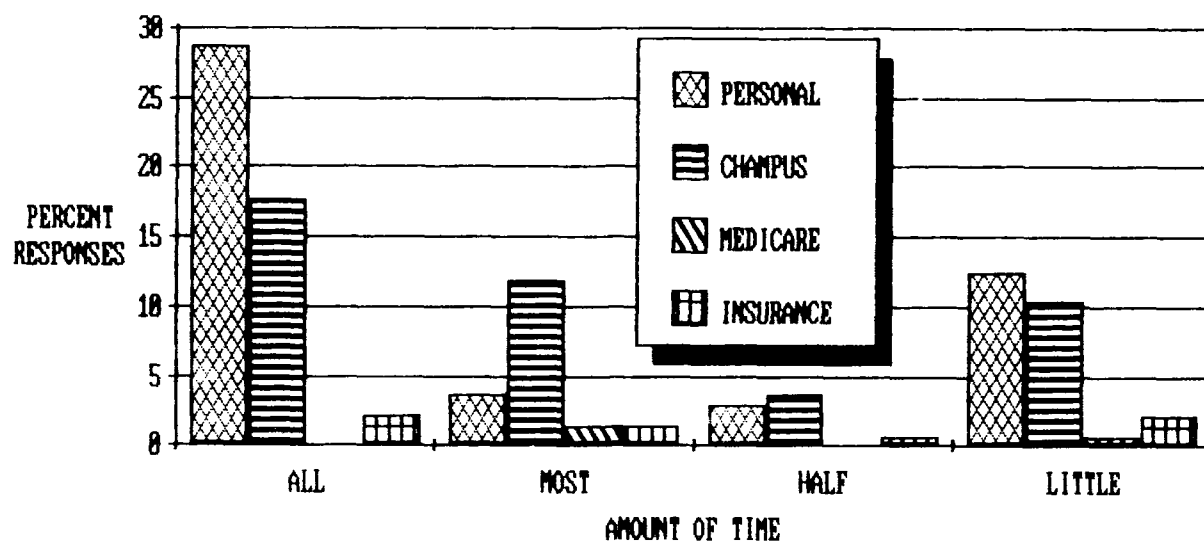cated they used private health insurance about "half of the time," and 4.11% (n=15) indicated they only used private health insurance a "little of the time."

The distribution of 209 responses to the question of how often retiree family members went to MACH, a private hospital, or another healthcare source not listed for inpatient care during the past two years is shown in Figure 26. As shown, a total of 44.5% (n=93) indicated they used MACH for their inpatient healthcare needs "all of the time." 6.22% (n=13) indicated they used MACH "most of the time," 0.96% (n=2) indicated they used MACH about "half of the time," and 1.44% (n=3) indicated they
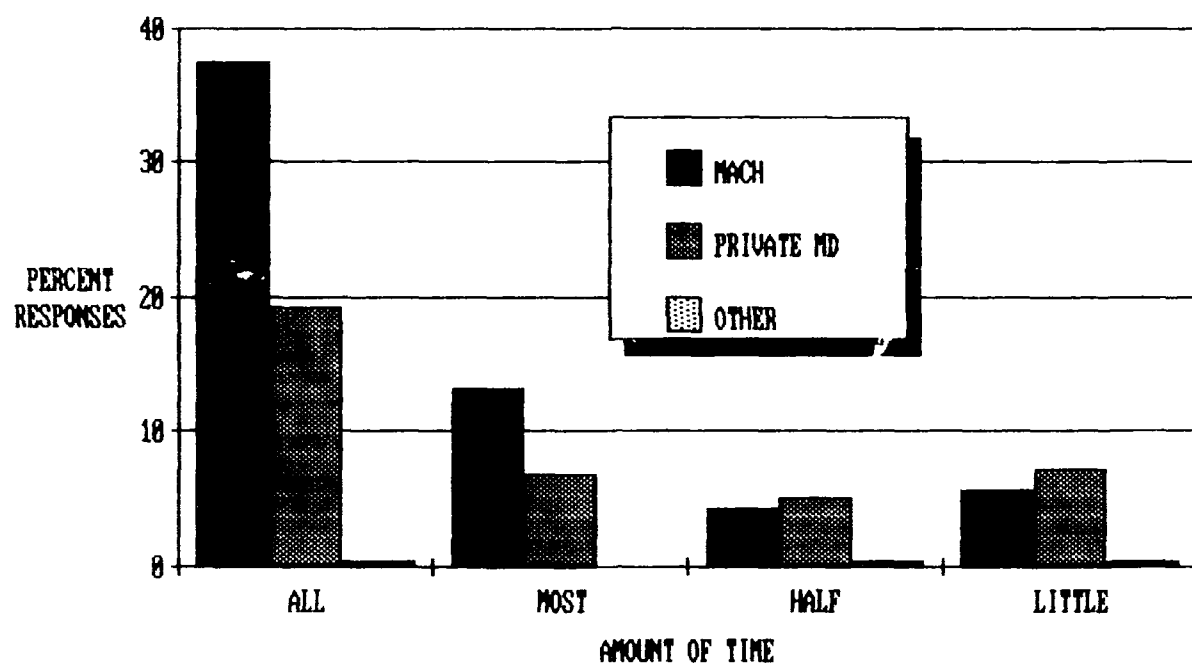
Figure 24. Distribution of Family Member Responses to the
Retiree Questionnaire by Location of Outpatient Care
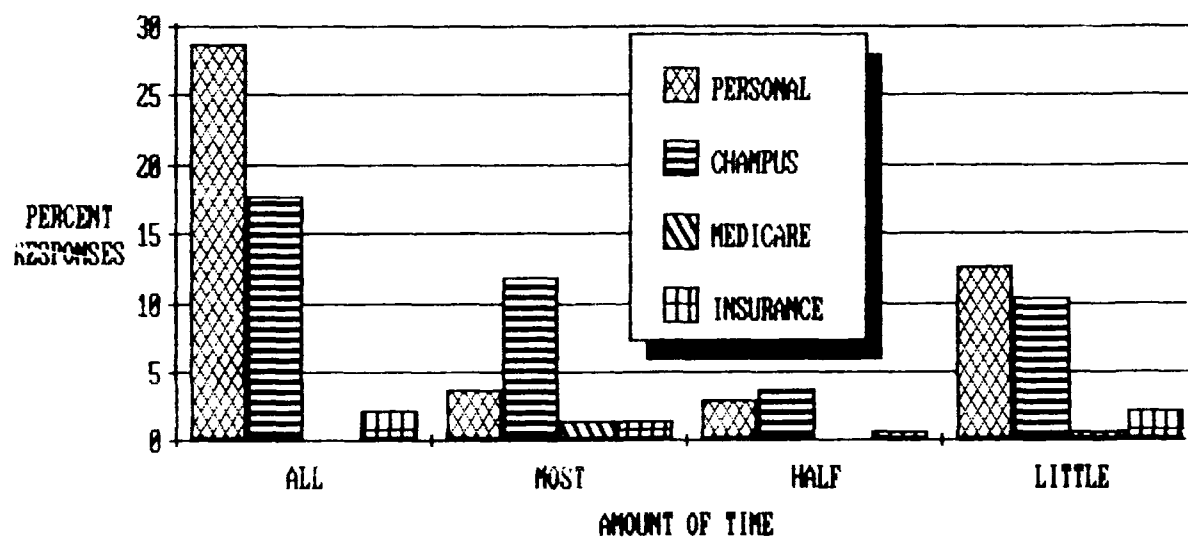
Figure 25. Distribution of Family Member Responses to the
Retiree Questionnaire by Payment Method for Outpatient Care

only used MACH a `little of the time.` By comparison, a total of 37.32% (n=78) indicated they used a private hospital for their inpatient needs `all of the time,` 2.87% (n=6) indicated they used a private hospital `most of the time,` 0.48% (n=1) indicated they used a private hospital about `half of the time,` and 5.26% (n=11) indicated they only used a private hospital a `little of the time.` Finally, a total of 0.48% (n=1) indicated they used another healthcare source not listed for their inpatient needs `all of the time,` none indicated they used another healthcare source `most of the time,` none indicated they used another healthcare source about `half of the time,` and 0.48% (n=1) indicated they only used another healthcare source a `little of the time.`
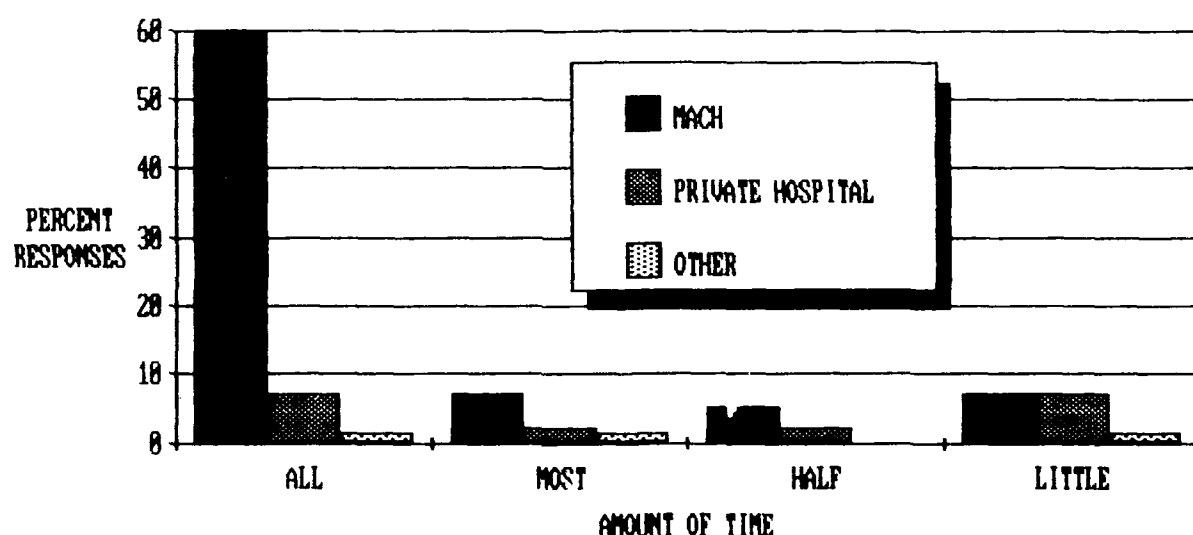
The distribution of 202 responses to the question of how often retiree family members paid for inpatient stays at a hospital other than MACH using personal money without reimbursement, CHAMPUS, Medicare, or private health insurance is shown in Figure 27. As shown, a total of 7.92% (n=16) indicated they used personal money without reimbursement `all of the time,` 2.48% (n=5) indicated they used personal money without reimbursement `most of the time,` 2.97% (n=6) indicated they used personal money without reimbursement about `half of the time,` and 5.45% (n=11) indicated they only used personal money without reimbursement a `little of the time.` A total of 19.31% (n=39) indicated they used CHAMPUS `all of the time,` 5.94% (n=12) indicated they used CHAMPUS `most of the time,` 1.49% (n=3)

indicated they used CHAMPUS about "half of the time," and 5.94% (n=12) indicated they only used CHAMPUS a "little of the time." A total of 9.41% (n=19) of the respondents indicated their family members used Medicare "all of the time," 1.49% (n=3) indicated they used Medicare "most of the time," 0.99 (n=2) indicated they used Medicare about "half of the time," and 0.99% (n=2) indicated they only used Medicare a "little of the time." Finally, a total of 24.75% (n=50) indicated they used private health insurance "all of the time," 6.44% (n=13) indicated they used private health insurance "most of the time," 2.48% (n=5) indicated they used private health insurance about "half of the time," and 1.98% (n=4) indicated they only used private health insurance a "little of the time."

A copy of the descriptive statistics and frequency distributions calculated by SPSS/PC+ software for the retiree questionnaire is attached as Appendix P.
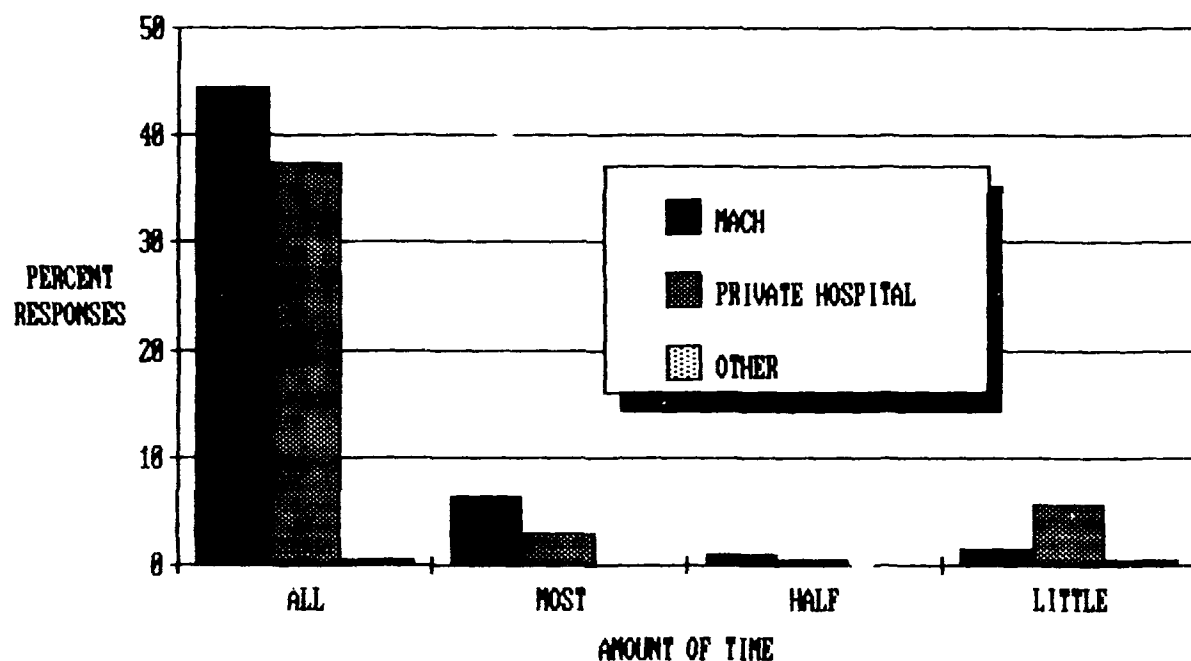
Figure 26. Distribution of Family Member Responses to the
Retiree Questionnaire by Location of Inpatient Care
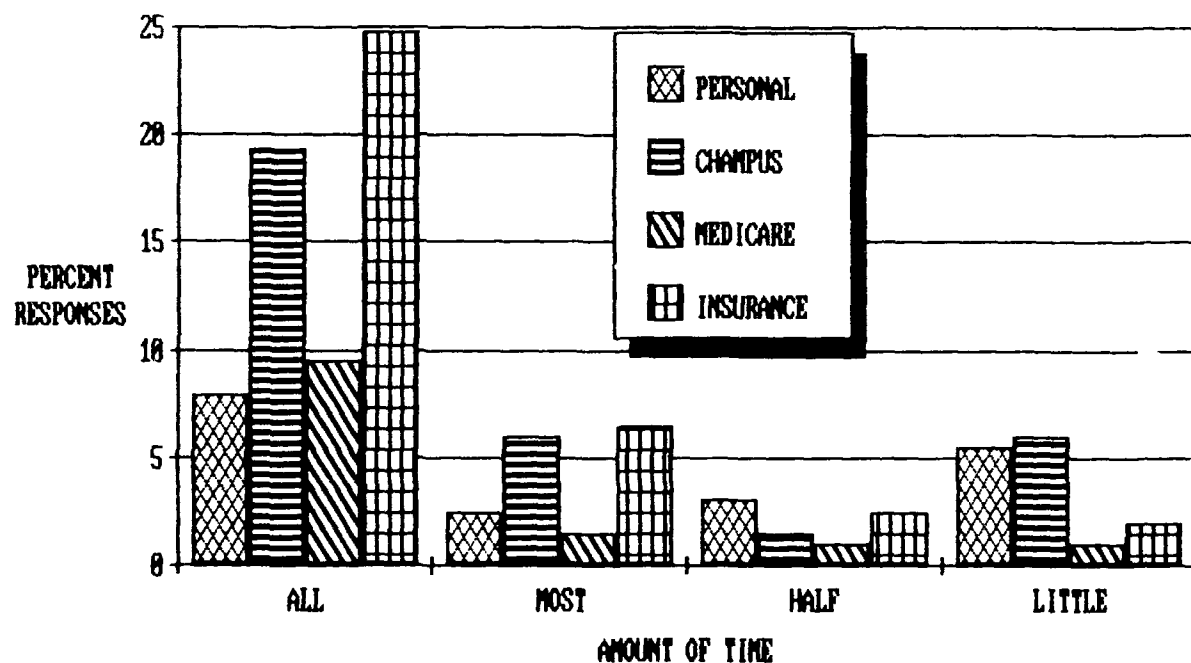
Figure 27. Distribution of Family Member Responses to the
Retiree Questionnaire by Payment Method for Inpatient Care

Crosstabulations and Chi-Square Analysis

When a beneficiary decides to seek medical care, numerous variables can influence whether the care will be sought from MACH or private sources. The relationship of two of these variables, straight line distance from MACH and total family income, on the location where active duty family members, retirees and retiree family members sought outpatient and inpatient care, was explored in this study.

Relationship of Distance to Location of Healthcare

Prior to the study, it was hypothesized that active duty family members, retirees, and retiree family members who lived greater distances away from MACH would be less likely to use the facility for outpatient visits and inpatient stays than those who lived closer. This hypothesis was based on the assumption that the time and difficulty in getting to the facility for those who lived greater distances would exceed the economic value of the care received. However it was felt that the relationship, if it did exist, would not be equally strong for both outpatient and inpatient care, for two reasons. First, beneficiaries must receive approval from MACH prior to admission to a private hospital in order to receive CHAMPUS funding. As a result, MACH can weaken the relationship by requiring beneficiaries to use its services or pay out-of-pocket for services received from a private hospital, which in turn makes beneficiaries more likely to use MACH. Second, because the cost of inpatient care is

significantly higher than the cost of outpatient care in most cases, the higher economic value of the inpatient care received is more likely to offset the time and difficulty in getting to the facility. Again, the result is to make beneficiaries more likely to use MACH regardless of distance. Thus, it was hypothesized that the relationship between distance and inpatient care would not be as strong as the relationship between distance and outpatient care, at the same level of significance.

In order to determine if the relationships hypothesized actually existed, the location of both outpatient and inpatient healthcare sources (i.e., MACH, private physician, private hospital, or healthcare source not listed) was cross tabulated by the distance of the respondent's zip code from MACH (i.e., 0-10 miles, 11-20 miles, 21-30 miles and 31-40 miles). For each crosstabulation, distance was considered as the causal, or independent variable, and the location of the healthcare was considered as the response, or dependent variable. A Chi-Square analysis was then conducted on each table to determine if the relationship between distance and location was significant at the p=.05 level of significance. Finally, the statistic gamma was calculated for all relationships significant at the p=.05 level of significance to determine direction, direct or inverse, of the relationship.

The analysis indicated that there was a relationship between distance and retiree use of MACH (p=.0026). Gamma was computed at .22487, implying a direct relationship exists between the

variables. A second relationship was indicated for distance and retiree use of a private hospital (p=.0252). Gamma was computed at .40214, implying a moderate direct relationship exists between the variables.

Caution must be exercised, however, in the interpretation of this data. In the Chi-square analysis of distance and retiree use of MACH for inpatient care, 68.8% of the expected frequency cells had less than the minimum five cases per cell. In the Chi-square analysis of distance and retiree use of a private hospital, 81.3% of the expected frequency cells had fewer than five cases per cell. Therefore both of these analysis fail to meet the minimum number of five cases per expected frequency cell that is recommended by the SPSS/PC+ instruction manual. (Norusis 1986, B-99).

Relationship of Annual Family Income to Location of Healthcare

Also prior to the study, it was hypothesized that active duty family members, retirees, and retiree family members who had a greater fami.. ncome would be less likely to use the facility for outpatient visits and inpatient stays than those who had a smaller reported family income. This hypothesis was based on the assumption that families with a greater annual income would be less motivated to put up with the problems of access associated with receiving care at MACH. If a family had more disposable income, it was believed that they would be more likely to purchase and use private healthcare insurance, or to pay for healthcare received using personal funds without reimbursement.

As with the variable of distance, however, it was felt that the relationship would be weaker for inpatient care. Again, the reasoning for this assumption was the belief that MACH can weaken the relationship by requiring beneficiaries to use its services or pay out-of-pocket for services received from a private hospital, which, in turn, makes beneficiaries more likely to use MACH. Also as before, it was believed that the high cost of inpatient care makes it much less likely that a beneficiary would have the option of paying for inpatient care with personal funds without reimbursement. Thus, as before, it was hypothesized that the relationship between annual family income and inpatient care would not be as strong as the relationship between annual family income and outpatient care. at the same level of significance.

The same crosstabulation procedure used before was again utilized to determine if the relationships hypothesized between the location of both outpatient and inpatient healthcare sources (i.e., MACH, private physician, private hospital, or healthcare source not listed) and annual family income (i.e., less than \$15,000.00, \$15,000.00-\$29,999.99, and greater than \$30,000.000). For each crosstabulation, annual family income was considered as the causal, or independent variable, and the location of the healthcare was considered as the response, or dependent variable. As before, a Chi-Square analysis was then conducted on each table to determine if the relationship between distance and location was significant at the $p=.05$ level of

significance.   Finally, the statistic gamma was calculated for all relationships significant at the p=.05 level of significance to determine direction, direct or inverse, of the relationship.

The analysis indicated that there was a relationship between annual family income and retiree office visits to a private physician (p=.0037). Gamma was computed at -.37822, implying an inverse relationship exists between these variables. A second relationship was indicated for annual family income and retiree use of a private hospital (p=.0034). Gamma was computed at -.70927, implying a strong inverse relationship exists between these variables.

As noted earlier, caution must be exercised in the interpretation of this data. In the Chi-square analysis of annual family income and retiree office visits to a private physician, 33% of the expected frequency cells had fewer than the five cases per cell. In the Chi-square analysis of annual family income and retiree use of a private hospital, 75% of the expected frequency cells had fewer than five cases per cell. Therefore, both of these analyses fail to meet the minimum number of five cases per expected frequency cell that is recommended by the SPSS/PC+ instruction manual. (SPSS Inc. 1986, B-99).

A copy of the crosstabulation and Chi-square analysis data produced by the SPSS/PC+ software for both distance and annual family income is attached as Appendix Q.

Endnotes

[1]Other respondents to the same questions are believed to have handled this same situation by leaving the questions blank, while still others were noted to respond by writing 'N/A,' presumably to indicate that the questions were not applicable to the respondent.

[2]The SIDPERS database used to identify and select the sample population of active duty soldiers provided a rank distribution for each unit. Thus, it was possible to total the number of soldiers by rank for the entire sample population, and to express each rank as a percentage of the total sample size. Since this data represented the response rate expected if 100% of the sample responded to the questionnaire, it became the expected response rate by rank.

[3]It is important to note that all of the questions contained in Section II of the active duty questionnaire, and Sections II and III of the retiree questionnaire, allowed the respondent to provide multiple responses. For example, an individual could indicate 'most of the time' for one of the choices given, and a 'little of the time' for another, or 'half of the time' for two of the choices given. Thus, the number or responses indicated, in this case 249, does not mean that number of separate individuals provided a response to the question.

[4]Active duty personnel are authorized to claim parents and other close relatives under certain circumstances. Although

these individuals would normally be authorized to use the CHAMPUS program, federal law dictates that after they reach the age of 65, they must use the Medicare program. Thus, although a large numbers of responses indicating family members using Medicare would not be expected, certainly the small number of responses in this case is not unreasonable, and, therefore, likely valid.

*The retiree sample population was selected by zip code, as previously mentioned, and as shown at Appendix G. From this list, each of the zip codes, and their respective samples, were placed into one of four groups according to their distance from MACH, as defined in the 1987 Catchment Area Directory, U.S. Inpatient. Thus, it was possible to group the entire sample into one of the four distance groups. The respective sample for each distance group was then converted into a percentage of the total sample population. Since this data represented the response rate expected if 100% of the sample responded to the questionnaire, it became the expected response rate by distance.

*Two of the individuals wrote in the name of their private health insurance as a response to this question, rather than indicating the type of coverage as requested; as a result, the type of coverage could not be identified.

CHAPTER III

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The intent of this study was to determine the proportionate number of U.S. Army retirees, retiree family members and active duty family members living within the CHAMPUS catchment area of MACH who are seeking healthcare from private sources. Although this was accomplished, practical application of the results obtained was significantly restricted by limitations in the design of the survey instruments. However, demographic data obtained from the survey is considered valid and therefore allows several useful conclusions about the beneficiary population residing within the CHAMPUS catchment area of MACH to be drawn.

For the population of permanent party soldiers assigned to Fort Benning, with one or more family members living within the MACH CHAMPUS catchment area, it was found that 95% reside within 10 miles of Fort Benning. The average number of family members for the population, excluding the active duty soldier, is 2.65. Approximately 4% of the population currently believes they are not currently enrolled on the DEERS database, while another 6.5% is not sure of their enrollment status. Finally, approximately 20% of the population currently has some type of private health insurance.

It was also noted that a high number of the completed

active duty questionnaires, which were excluded because the family members reside outside of the MACH CHAMPUS catchment area, came from soldiers in the rank of E-3 and below. This suggests that some undetermined factors, possible economic, cause the family members of these soldiers not reside with their sponsor.

For the population of retirees living within the MACH CHAMPUS catchment area, it was found that the mean age was 59 years. The mean number of family members for the population, excluding the retiree, is 1.7. Approximately 10% of the population believes they are not currently enrolled on the DEERS database, while another 3% is not sure of their enrollment status. Finally, approximately 70% of the population currently has some type of private health insurance.

In addition to conclusions from the demographic data obtained from the survey, several valuable conclusions can also be drawn from mistakes made in the survey instrument design. Careful consideration of these conclusions will avoid similar limitations in future studies of this nature.

First, questions were not worded so that respondents could indicate that they had not required c .patient or inpatient care, and exclude themselves from providing responses to questions about location and payment systems used. This omission was the result of a conscious decision to keep the length of the survey instruments as short as possible in order to minimize the time required to complete the questionnaire and thereby maximize the response rate. As a result, the additional space required to

allow exclusion was traded off for a shorter survey instrument. In hindsight, the data obtained from self exclusion would have been valuable in its own right, because it would have allowed statistical inferences to be made about the general health of the population of interest. For example, had this been done in this study, demographic data about the age of the population within MACH's CHAMPUS catchment area could have been combined with statistical inferences about the health of the population by age group to give resource managers a picture of future demands for healthcare needs.

Second, the type of measurement used was not appropriate for the type of study undertaken. This was a longitudinal study designed to look at trends over a specified period of time, as evidenced by the fact that all of the questions regarding healthcare source and payment began with the phrase 'during the past two years.' With a longitudinal study, the actual number of times a respondent used each of the healthcare sources and payment systems would have produced much more useful data. For example, it would have been possible to statistically infer exactly what proportion of the sample populations were using each location and payment system, and then to make management decisions regarding resource allocation within the MACH CHAMPUS catchment area based on the findings. Thus, interval data would have been much more appropriate for a longitudinal study.

Third, the two year length of time used as a reference in the study was inappropriate for obtaining data about outpatient

healthcare. Inpatient stays are generally fewer in number, and generally have a higher significance to the respondent that makes them more easily remembered. Outpatient visits, on the other hand, are much more frequent, and generally less significant and therefore more difficult to remember by the respondent. This could have been remedied by either reducing the reference length of time, possibly to six months, or by conducting a cross sectional study that examined healthcare use at a specific point of time. For example, respondents could have been asked where they went for their last outpatient visit and inpatient stay. The resulting data would have provide a "snapshot" of healthcare location and payment systems within the MACH CHAMPUS catchment area that would have also produced information useful in resource management decisions.

Finally, the limitations encountered in this study clearly demonstrate the large number of options available to beneficiaries living within the catchment area. As a result, it is extremely difficult to design a short, simple survey instrument that covers all possibilities of location and payment systems. It may be more feasible to narrow the focus of the survey to a specific area of healthcare, such as use of CHAMPUS. If the scope cannot be narrowed due to the nature of the survey, however, a telephonic survey may be a better alternative than a questionnaire, because of the flexibility it offers.

Recommendations

The term 'resource constraints' is all to frequently used in any discussion of the Army Medical Department today. Examples abound, such as directives to fill civilian vacancies at a rate of one hire for every two vacancies, discontinuing overtime authorizations except for safety or emergency requirements, deferring all non-mission travel for civilian and military employees, restricting in-house facility maintenance to emergency repair, deferring all contract advisory assistance services, and deferring all contract actions for selected equipment and supplies initiated during the period 20 May through 30 June (Message #312330Z May 88, Sections I and II). Few within the AMEDD would argue that these actions are not a passing fad, but rather a sign of leaner times to come. Thus, in order to sustain the current level of services provided to beneficiaries, resource managers must learn to get the most value from every dollar allocated to healthcare. At the medical treatment facility level, a key ingredient to success in this task is obtaining accurate data regarding the needs of the beneficiary population within the hospital's catchment area.

Unfortunately, this type of data is woefully lacking within the AMEDD. This is illustrated by a recent communication between the resource manager and the Commander of MACH regarding variances between the number of beneficiaries within the hospital's catchment area reported by Fort Benning and the number reported by Health Services Command. The conclusion of the

resource manager was that the only consistency in both sets of data was the inconsistencies of the methodologies used. Another, far more serious conclusion, is that at a time of great need, local medical treatment facility resource managers are lacking in even basic data on which to base decisions regarding utilization of scarce healthcare dollars.

Against this background, this study offers a methodology for responding to this need. It is particularly important that the limitations of the survey instruments used in the study not be allowed to detract from the fact that the methodology used was valid. Great effort goes into ensuring that both of the databases used in this study are constantly updated and maintained. Both are believed to be far more accurate than any other available source of data for their respective populations. In addition, although retirees of branches of the service other than the Army (i.e., U.S. Navy, U.S. Air Force, and U.S. Marines) were excluded from this study, there is every reason to believe that the same type of database exists for those individuals also, and could also be incorporated into future studies of catchment area healthcare utilization. It is therefore recommended that the methodology used in this study be adopted for studies of catchment area beneficiary populations of medical treatment facilities within Health Services Command.

APPENDIX A

MACH INPATIENT CHAMPUS CATCHMENT AREA

INPATIENT CATCHMENT AREA

GA-1

MARTIN AH FT BENNING

ZIP CODES WITHIN 40 MILES OF FACILITY

ZIP CODE	TOWN NAME	STATE	STATUS	DIST	NEW ZIP
30253	STOVAL	GA	NO OVERLAP	40	
31039	HOWARD	GA	NO OVERLAP	35	
31058	MAUK	GA	NO OVERLAP	31	
31081	RUPERT	GA	NO OVERLAP	39	
31721	BENEVOLENCE	GA	NO OVERLAP	37	
31754	GEORGETOWN	GA	NO OVERLAP	36	
31780	PLAINS	GA	NO OVERLAP	39	
31788	SPRINGVALE	GA	NO OVERLAP	39	
31801	BOX SPRINGS	GA	NO OVERLAP	19	
31803	BUENA VISTA	GA	NO OVERLAP	25	
31804	CATAULA	GA	NO OVERLAP	19	
31805	CUSSETA	GA	NO OVERLAP	11	
31806	ELLAVILLE	GA	NO OVERLAP	38	
31807	ELLERSLIE	GA	NO OVERLAP	19	
31808	FORTSON	GA	NO OVERLAP	15	
31810	GENEVA	GA	NO OVERLAP	26	
31811	HAMILTON	GA	NO OVERLAP	26	
31812	JUNCTION CITY	GA	NO OVERLAP	32	
31813	JUNIPER	GA	NO OVERLAP	22	
31814	LOUVALE	GA	NO OVERLAP	16	
31815	LUMPKIN	GA	NO OVERLAP	25	
31816	MANCHESTER	GA	NO OVERLAP	38	
31820	MIDLAND	GA	NO OVERLAP	15	
31821	OMAHA	GA	NO OVERLAP	17	
31822	PINE MOUNTAIN	GA	NO OVERLAP	33	
31823	PINE MTN VLY	GA	NO OVERLAP	29	
31824	PRESTON	GA	NO OVERLAP	32	
31825	RICHLAND	GA	NO OVERLAP	25	
31826	SHILOH	GA	NO OVERLAP	33	
31827	TALBOTTON	GA	NO OVERLAP	31	
31828	TAZEWELL	GA	NO OVERLAP	29	
31829	COLUMBUS	GA	NO OVERLAP	16	
31830	WARM SPRINGS	GA	NO OVERLAP	38	
31831	WAVERLY HALL	GA	NO OVERLAP	24	
31832	WESTON	GA	NO OVERLAP	33	
31833	WEST PT	GA	NO OVERLAP	37	
31836	WOODLAND	GA	NO OVERLAP	35	
31901	COLUMBUS	GA	NO OVERLAP	6	
31902	COLUMBUS	GA	NO OVERLAP	6	
31903	COLUMBUS	GA	NO OVERLAP	2	
31904	COLUMBUS	GA	NO OVERLAP	7	
31905	COLUMBUS	GA	NO OVERLAP	0	
31906	COLUMBUS	GA	NO OVERLAP	5	
31907	COLUMBUS	GA	NO OVERLAP	5	
31908	COLUMBUS	GA	NO OVERLAP	7	
31909	COLUMBUS	GA	NO OVERLAP	10	
31993	COLUMBUS	GA	NO OVERLAP	7	NEW

MARTIN AH FT BENNING

ZIP CODES WITHIN 40 MILES OF FACILITY (CONTINUED)

ZIP CODE	TOWN NAME	STATE	STATUS	DIST	NEW ZIP
31994	COLUMBUS	GA	NO OVERLAP	7	NEW
31995	COLUMBUS	GA	NO OVERLAP	7	NEW
31998	COLUMBUS	GA	NO OVERLAP	7	
31999	COLUMBUS	GA	NO OVERLAP	7	
36027	EUFAULA	AL	NO OVERLAP	36	
36053	MIDWAY	AL	NO OVERLAP	40	
36801	OPELIKA	AL	NO OVERLAP	37	
36802	OPELIKA	AL	NO OVERLAP	37	NEW
36803	OPELIKA	AL	NO OVERLAP	37	
36830	AUBURN	AL	NO OVERLAP	36	
36831	AUBURN	AL	NO OVERLAP	36	NEW
36849	AUBURN	AL	NO OVERLAP	18	
36851	COTTONTON	AL	NO OVERLAP	25	
36852	CUSSETA	AL	NO OVERLAP	25	
36854	VALLEY	AL	NO OVERLAP	37	
36856	FORT MITCHELL	AL	NO OVERLAP	6	
36858	HATCHECHUBBEE	AL	NO OVERLAP	21	
36859	COTTONTON	AL	NO OVERLAP	12	
36860	HURTSBORO	AL	NO OVERLAP	30	
36863	LANETT	AL	NO OVERLAP	36	
36864	VALLEY	AL	NO OVERLAP	31	
36867	PHENIX CITY	AL	NO OVERLAP	7	
36868	PHENIX CITY	AL	NO OVERLAP	7	
36871	PITTSVIEW	AL	NO OVERLAP	19	
36872	VALLEY	AL	NO OVERLAP	29	
36874	SALEM	AL	NO OVERLAP	22	
36875	SEALE	AL	NO OVERLAP	15	
36876	VALLEY	AL	NO OVERLAP	31	
36877	SMITHS	AL	NO OVERLAP	14	

APPENDIX B

ACTIVE DUTY QUESTIONNAIRE

DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY MEDICAL DEPARTMENT ACTIVITY
FORT BENNING, GEORGIA 31905-6100

April 7, 1988

Office of the Commander

Dear Active Duty Sponsor:

I am committed to ensuring that Martin Army Community Hospital meets the healthcare needs of your family. Yet with the budget limitations we are continually experiencing, this is becoming increasingly difficult. One option that I am currently exploring is the possibility of becoming the custodian of the funds for the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) within our area. This would allow me to offer many more health care options to your family members with greater flexibility to meet your individual needs.

You can help in this effort by completing this short questionnaire regarding where members of your family, excluding yourself, are currently receiving their healthcare. Your responses will be invaluable in this effort, and completing the questionnaire will take less than five minutes of your time. Thank you for your assistance.

Sincerely,

Herbert E. Segal, M.D.
Colonel, U.S. Army
Commanding

Enclosure

****

INSTRUCTIONS

This questionnaire consists of two sections. The first section asks you to provide background information about your family. The second section asks you questions about where your family members receive their health care.

When you finish the questionnaire, please return it to your unit First Sergeant. However if you prefer, you may fold it, staple, and place it in any outgoing distribution box. No postage is required.

****

SECTION I: BACKGROUND INFORMATION

1. What is your rank?   _____

2. What is the zip code for your local address?   _____

3. How many family members do you have that either live with you at the above zip code, or live within 40 miles of Martin Army Community Hospital?   _____

4. Are all of the family members listed above registered on the Defense Enrollment Eligibility Reporting System (DEERS)?

       _____ Yes   _____ No   _____ I don't know

5. What was your total family income, rounded off to the nearest thousand dollars, during the last calender year? $____,000.00

6. Are you or your family members currently covered by either supplemental or comprehensive private health insurance? If so, please indicate with an 'X' the type of policy and who in your family is covered.

	Yourself	Family Members
a. Supplemental Coverage		
1. Inpatient Only	_____	_____
2. inpatient and Outpatient	_____	_____
b. Com·ehensive Coverage		
ı ، patient Only	_____	_____
2. I⁻ ⁻tient and Outpatient	_____	_____

****
THIS CONCLUDES SECTION I. IF YOU HAVE FAMILY MEMBERS LIVING WITHIN 40 MILES OF MARTIN ARMY COMMUNITY HOSPITAL, PLEASE GO ON TO SECTION II. IF NOT, PLEASE RETURN THE QUESTIONNAIRE TO YOUR UNIT FIRST SERGEANT.
****

SECTION II: YOUR FAMILY'S HEALTH CARE

Section II consists of four questions regarding where **your family members** receive their health care. For each question, please select the response which you feel most appropriate and enter the matching code in the space provided to the right.

CODE	RESPONSE
1	All of the time
2	Most of the time
3	About half of the time
4	Very little of the time
5	None of the time

1. During the past two years, when members of your family were sick and needed to see a physician for an **office visit**, how often did they go to:

                                                 CODE

    a. Martin Army Community Hospital? _____
    b. A private physician? _____
    c. A healthcare source not listed above? _____
        (Please Identify):_____

2. During the past two years, if members of your family were sick and went to see a physician other than at Martin Army Community Hospital for an **office visit**, how often was the visit paid for using:

                                                 CODE

    a. Personal money without reimbursement _____
    b. CHAMPUS _____
    c. MEDICARE _____
    d. Private health insurance _____

3. During the past two years, when members of your family were sick and needed to be **hospitalized**, how often did they go to:

                                                 CODE

    a. Martin Army Community Hospital? _____
    b. A private hospital? _____
    c. A healthcare source not listed above? _____
        (Please Identify):_____

4. During the past two years, if members of your family were sick and admitted to a **hospital** other than at Martin Army Community Hospital, how often was their stay paid for using:

                                               CODE

    a. Personal money without reimbursement _____
    b. CHAMPUS _____
    c. MEDICARE _____
    d. Private health insurance _____

****
THIS CONCLUDES THE SURVEY. PLEASE RETURN THE QUESTIONNAIRE TO YOUR UNIT FIRST SERGEANT. HOWEVER, IF YOU PREFER, YOU MAY FOLD, STAPLE, AND DROP INTO ANY OUTGOING DISTRIBUTION BOX. NO POSTAGE IS REQUIRED. THANK YOU.
****

APPENDIX C

RETIREE QUESTIONNAIRE

DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY MEDICAL DEPARTMENT ACTIVITY
FORT BENNING, GEORGIA 31905-6100

April 7, 1988
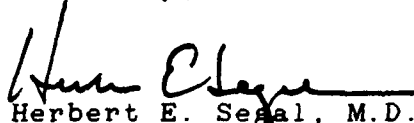
Office of the Commander

Dear Retiree:

    I am committed to ensuring that Martin Army Community Hospital continues to meet the healthcare needs of retired beneficiaries and their family members. Yet with the budget limitations experienced over the past few years, this is becoming increasingly difficult. One option that I am currently exploring is the possibility of becoming the custodian of funds for the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) within our area. This would allow much greater flexibility in offering health care options to you and your family.

    You can help in this effort by completing this short questionnaire regarding where you and your family members are currently receiving your healthcare. Your responses will be invaluable in this effort, and completing the questionnaire will take less than five minutes of your time. Thank you for your assistance.

Sincerely,

Herbert E. Segal, M.D.
Colonel, U.S. Army
Commanding

Enclosure

****

INSTRUCTIONS

This questionnaire consists of three sections. The first section asks you to provide background information. The second section asks you questions about where you receive your health care. The third section asks you where your family members receive their health care.

When you finish the questionnaire, please fold it, place it in the envelope provided, and drop it in the nearest mailbox. No postage is required.

****

SECTION I: BACKGROUND INFORMATION

1. What is your current age?   _____

2. What is your retired rank?   _____

3. What is the zip code where you currently reside?   _____

4. How many family members do you have that either live with you at the above zip code, or live within 40 miles of Martin Army Community Hospital, Fort Benning?   _____

5. Are all of the family members listed above registered on the Defense Enrollment Eligibility Reporting System (DEERS)?

_____ Yes   _____ No   _____ I don't know

6. What was your total family income, rounded off to the nearest thousand dollars, during the last calender year?   #_____,000.00

7. Are you or your family members currently covered by either supplemental or comprehensive private health insurance? If so, please indicate with an 'X' the type of policy and who in your family is covered.

	Yourself	Family Members
a. Supplemental Coverage		
1. Inpatient Only	_____	_____
2. Inpatient and Outpatient	_____	_____
b. Comprehensive Coverage		
1. Inpatient Only	_____	_____
2. Inpatient and Outpatient	_____	_____

****
THIS CONCLUDES SECTION I. PLEASE GO ON TO SECTION II.
****

SECTION II: YOUR HEALTH CARE

Section II consists of four questions regarding where **you** receive your
health care. For each question, please select the response which you feel most
appropriate and enter the matching code in the space provided to the right.

CODE	RESPONSE
1	All of the time
2	Most of the time
3	About half of the time
4	Very little of the time
5	None of the time

1. During the past two years, when you were sick and needed to see a physician
for an **office visit**, how often did you go to:

CODE

a. Martin Army Community Hospital?   _____
b. A private physician?   _____
c. A healthcare source not listed above? _____
    (Please Identify):

2. During the past two years, if you were sick and went to see a physician other
than at Martin Army Community Hospital for an **office visit**, how often did you pay
for the visit using:

CODE

a. Personal money without reimbursement   _____
b. CHAMPUS   _____
c. MEDICARE   _____
d. Private health insurance   _____

3. During the past two years, when you were sick and needed to be **hospitalized**,
how often did you go to:

CODE

a. Martin Army Community Hospital?   _____
b. A private hospital?   _____
c. A healthcare source not listed above? _____
    (Please Identify):

4. During the past two years, if you were sick and admitted to a **hospital** other
than at Martin Army Community Hospital, how often did you pay for the stay using:

CODE

a. Personal money without reimbursement   _____
b. CHAMPUS   _____
c. MEDICARE   _____
d. Private health insurance   _____

****
THIS COMPLETES SECTION II. IF YOU HAVE FAMILY MEMBERS LIVING WITH YOU, PLEASE GO
ON TO SECTION III. IF NOT, PLEASE FOLD THE QUESTIONNAIRE, PLACE IT IN THE
ENVELOPE PROVIDED, AND DROP IT IN THE NEAREST MAILBOX. NO POSTAGE IS REQUIRED.
****

SECTION III: YOUR FAMILY'S HEALTH CARE

Section III consists of four questions regarding where your **family members** receive their health care, and how you pay for it when payment is required. For each question, please select the response which you feel most appropriate and enter the matching code in the space provided to the right.

CODE	RESPONSE
1	All of the time
2	Most of the time
3	About half of the time
4	Very little of the time
5	None of the time

1. During the past two years, when members of your family were sick and needed to see a physician for an **office visit**, how often did they go to:

                                                        CODE
a. Martin Army Community Hospital?   _____
b. A private physician?   _____
c. A healthcare source not listed above?   _____
    (Please Identify):

2. During the past two years, if members of your family were sick and went to see a physician other than at Martin Army Community Hospital for an **office visit**, how often was the visit paid for the visit using:

                                                        CODE
a. Personal money without reimbursement   _____
b. CHAMPUS   _____
c. MEDICARE   _____
d. Private health insurance   _____

3. During the past two years, when members of your family were sick and needed to be **hospitalized**, how often did they go to:

                                                        CODE
a. Martin Army Community Hospital?   _____
b. A private hospital?   _____
c. A healthcare source not listed above?   _____
    (Please Identify):

4. During the past two years, if members of your family were sick and admitted to a **hospital** other than at Martin Army Community Hospital, how often was their stay paid for using:

                                                        CODE
a. Personal money without reimbursement   _____
b. CHAMPUS   _____
c. MEDICARE   _____
d. Private health insurance   _____

****
     THIS CONCLUDES THE SURVEY. PLEASE FOLD THE QUESTIONNAIRE, PLACE IT IN THE
ENVELOPE PROVIDED, AND DROP IT IN THE NEAREST MAILBOX. NO POSTAGE IS REQUIRED.
                              THANK YOU.
****

APPENDIX D

POPULATION OF PERMANENT PARTY SOLDIERS CLAIMING

DEPENDENTS, LISTED BY UNIT IDENTIFICATION CODE (UIC)

UIC	NO.	UIC	NO.	UIC	NO.	UIC	NO.
AGOAA	89	FK6AA	104	2L502	25	4H2ZG	11
ALVAO	56	GDKAA	49	2L503	6	4H2ZH	11
ALVBO	48	GK6AO	46	2L504	9	4H2ZJ	10
ALVCO	41	GK6BO	38	2L506	17	4H2ZL	2
ALVTO	102	GK6CO	57	2L507	19	4H21A	15
ARXAO	49	GK6DO	44	2L508	17	4H21B	16
ARXBO	52	GK6EO	32	2L509	17	4H21C	12
ARXCO	47	GK6TO	158	2L51E	1	4H21D	15
ARXSO	51	GM6AO	33	2L510	77	4H21E	16
ARXTO	135	GM6BO	33	2L51P	1	4H22A	10
AROAO	72	GM6CO	43	2L511	65	4H22B	15
AROBO	51	GM6DO	35	2L512	193	4H22C	12
AROCO	53	GM6TO	174	2L550	81	4H22D	13
ARODO	48	HEJAA	4	2L52X	1	4H22E	12
AROEO	30	HNKAO	56	2L58B	134	4H23A	14
AROTO	159	HNKBO	53	2L56B	1	4H23B	15
AR2AA	96	HNKCO	64	2L58D	106	4H23C	17
AR4AA	210	HNKTO	107	2L58E	64	4H23D	19
AZQAA	63	JBLAO	39	2L58F	114	4H23E	14
A4KAA	4	JBLBO	26	2L58G	68	4H24A	15
BBQAA	72	JBLCO	39	2L58H	93	4H24B	16
BDAAA	54	JBLTO	58	2L58J	82	4H24C	14
BDA99	63	OKEO6	4	2L58L	53	4H24D	16
BF1AA	45	OU2A1	192	2L58M	77	4H24E	15
BHFAA	26	OU2MP	66	2L58N	131	4H25A	16
BHZAA	110	OU2NT	5	2L58P	132	4H25B	18
BM2AA	94	OU2RC	1	2L58Q	122	4H25C	15
BNXAA	50	OU2RD	12	2L58R	1	4H25D	15
BS8AA	1	OU2RE	22	3CJAO	8	4H25E	16
B7PAA	8	OU2RO	167	3CJBO	5	4H26A	13
B91AA	2	O4UTO	77	3CJCO	7	4H26B	15
CPDAA	95	O4902	3	3CJDO	7	4H26C	15
CS3AA	25	1DQAA	69	3CJTO	154	4H26D	18
CVXA5	12	1J137	3	3LDL7	1	4H26E	16
CVX9E	6	18YAA	12	3LDP1	1	4H27A	16
C6QAA	6	2L3AA	392	3NVO1	1	4H27B	15
C6RAA	5	2L3DC	53	3SEAA	13	4H27C	16
C9TAA	39	2L301	5	4H2BH	29	4H27D	12
DDDAA	104	2L302	4	4H2CH	24	4H27E	17
DLRAO	77	2L304	1	4H2PF	9	4H28A	13
DDDRP	1	2L31A	21	4H2RA	12	4H28B	10
DLRBO	60	2L5AO	289	4H2RB	12	4H28C	18
DLRCO	78	2L5CO	2	4H2RH	20	4H28D	14
DLRTO	116	2L5TL	27	4H2SC	84	4H28E	12
EAMAA	4	2L5ZA	3	4H2ZA	12	4H29A	14
EWMAO	39	2L5ZB	3	4H2S3	1	4H29B	13
EWMBO	49	2L5ZC	3	4H2ZB	10	4H29C	16
EWMCO	70	2L5ZD	19	4H2ZC	13	4H29D	14
EWMDO	144	2L5ZE	10	4H2ZD	11	4H29E	18
EWMTO	106	2L5ZF	14	4H2ZE	12	4UBPP	172
E7MAA	127	2L501	19	4H2ZF	9		

TOTAL PERMANENT PARTY SOLDIERS CLAIMING DEPENDENTS AT FORT BENNING, GEORGIA, AS OF 15 APRIL, 1988: **8,968**

APPENDIX E

ADJUSTED POPULATION OF PERMANENT PARTY SOLDIERS CLAIMING

DEPENDENTS, LISTED BY UNIT IDENTIFICATION CODE (UIC)

UIC	NO.	UIC	NO.	UIC	NO.	UIC	NO.
						4H2ZH	11
AGOAA	89	EWMTO	106	2L506	17	4H2ZJ	10
ALVAO	56	E7MAA	127	2L507	19	4H2ZL	2
ALVBO	48	FK6AA	104	2L508	17	4H21A	15
ALVCO	41	GDKAA	49	2L509	17	4H21B	16
ALVTO	102	GK6AO	46	2L51E	1	4H21C	12
ARXAO	49	GK6BO	38	2L510	77	4H21D	15
ARXBO	52	GK6CO	57	2L51P	1	4H21E	16
ARXCO	47	GK6DO	44	2L511	65	4H22A	10
ARXSO	51	GK6EO	32	2L512	193	4H22B	15
ARXTO	135	GK6TO	158	2L550	81	4H22C	12
AROAO	72	GM6AO	33	2L52X	1	4H22D	13
AROBO	51	GM6BO	33	2L58B	134	4H22E	12
AROCO	53	GM6CO	43	2L56B	1	4H23A	14
ARODO	48	GM6DO	35	2L58D	106	4H23B	15
AROEO	30	GM6TO	174	2L58E	64	4H23C	17
AROTO	159	HEJAA	4	2L58F	114	4H23D	19
AR2AA	96	HNKAO	56	2L58G	68	4H23E	14
AR4AA	210	HNKBO	53	2L58H	93	4H24A	15
AZQAA	63	HNKCO	64	2L58J	82	4H24B	16
A4KAA	4	HNKTO	107	2L58L	53	4H24C	14
BBQAA	72	JBLAO	39	2L58M	77	4H24D	16
BDAAA	54	JBLBO	26	2L58N	131	4H24E	15
BDA99	63	JBLCO	39	2L58P	132	4H25A	16
BF1AA	45	JBLTO	58	2L58Q	122	4H25B	18
BHFAA	26	OKEO6	4	2L58R	1	4H25C	15
BHZAA	110	OU2A1	192	3CJAO	8	4H25D	15
BM2AA	94	OU2MP	66	3CJBO	5	4H25E	16
BNXAA	50	OU2NT	5	3CJCO	7	4H26A	13
BS8AA	1	OU2RC	1	3CJDO	7	4H26B	15
B7PAA	8	OU2RD	12	3CJTO	154	4H26C	15
B91AA	2	OU2RE	22	3LDL7	1	4H26D	18
CPDAA	95	OU2RO	167	3LDP1	1	4H26E	16
CS3AA	25	04UTO	77	3NVO1	1	4H27A	16
CVXA5	12	04902	3	3SEAA	13	4H27B	15
CVX9E	6	1DQAA	69	4H2BH	29	4H27C	16
C6QAA	6	1J137	3	4H2CH	24	4H27D	12
C6RAA	5	2L5AO	289	4H2PF	9	4H27E	17
C9TAA	39	2L5CO	2	4H2RA	12	4H28A	13
DDDAA	104	2L5TL	27	4H2RB	12	4H28B	10
DLRAO	77	2L5ZA	3	4H2RH	20	4H28C	18
DDDRP	1	2L5ZB	3	4H2SC	84	4H28D	14
DLRBO	60	2L5ZC	3	4H2ZA	12	4H28E	12
DLRCO	78	2L5ZD	19	4H2S3	1	4H29A	14
DLRTO	116	2L5ZE	10	4H2ZB	10	4H29B	13
EAMAA	4	2L5ZF	14	4H2ZC	13	4H29C	16
EWMAO	39	2L501	19	4H2ZD	11	4H29D	14
EWMBO	49	2L502	25	4H2ZE	12	4H29E	18
EWMCO	70	2L503	6	4H2ZF	9	4UBPP	172
EWMDO	144	2L504	9	4H2ZG	11		

TOTAL PERMANENT PARTY SOLDIERS CLAIMING DEPENDENTS AT FORT BENNING, GEORGIA, AS OF 15 APRIL, 1988: **8,480**

APPENDIX F

MACH CHAMPUS INPATIENT CATCHMENT AREA RETIREE POPULATION

LISTED BY ZIP CODE

STATE OF GEORGIA

ZIP CODE	TOWN	DISTANCE[1]	RETIREE[2] POPULATION	SURVIVOR[3] POPULATION	TOTAL POPULATION
30283	Stovall	38	1	0	1
31039	Howard	34	3	0	3
31058	Mauk	31	6	1	7
31081	Rupert	38	2	0	2
31721	Benevolence	37	1	0	1
31754	Georgetown	36	10	3	13
31780	Plains	39	8	0	8
31788	Springvale	39	NL[4]	NL[4]	NL[4]
31801	Box Springs	18	22	6	28
31803	Buena Vista	25	27	3	30
31804	Cataula	18	70	10	80
31805	Cusseta	11	90	15	105
31806	Ellaville	38	6	2	8
31807	Ellerslie	18	28	4	32
31808	Fortson	14	67	6	73
31810	Geneva	25	2	0	2
31811	Hamilton	25	33	8	41
31812	Junction City	31	8	1	9
31813	Juniper	21	NL[4]	NL[4]	NL[4]
31814	Louvale	16	NL[4]	NL[4]	NL[4]
31815	Lumpkin	25	10	1	11
31816	Manchester	37	17	6	23
31820	Midland	13	66	5	71
31821	Omaha	18	7	1	8
31822	Pine Mountain	32	13	3	16
31823	Pine Mount Val	28	20	4	24
31824	Preston	32	8	1	9
31825	Richland	26	15	1	16
31826	Shiloh	31	5	0	5
31827	Talbotton	30	10	1	11
31828	Tazewell	29	NL[4]	NL[4]	NL[4]
31829	Columbus	15	28	3	31
31830	Warm Springs	36	4	1	5
31831	Waverly Hall	22	52	8	60
31832	Weston	34	NL[4]	NL[4]	NL[4]
31833	West Point	35	42	7	49
31836	Woodland	34	6	1	7
31901	Columbus	5	56	18	74
31902	Columbus	5	53	13	66
31903	Columbus	1	1,396	309	1,705
31904	Bibb City	6	839	141	980
31905	Fort Benning	0	82	8	90
31906	Columbus	5	784	156	940
31907	Columbus	5	2,454	357	2,811
31908	Columbus	6	53	1	54
31909	Columbus	6	281	31	312
31998	Columbus	6	NL[4]	NL[4]	NL[4]
31999	Columbus	6	NL[4]	NL[4]	NL[4]
	GEORGIA TOTALS:		6,685	1,136	7,821

STATE OF ALABAMA

ZIP CODE	TOWN	DISTANCE[1]	RETIREE[2] POPULATION	SURVIVOR[3] POPULATION	TOTAL POPULATION
36027	Eufalula	36	NL[4]	NL[4]	NL[4]
36053	Midway	40	2	1	3
36801	Opelika	31	119	30	149
36803	Opelika	31	NL[4]	NL[4]	NL[4]
36830	Auburn	35	101	20	121
36831	Auburn	35	NL[4]	NL[4]	NL[4]
36851	Cottonton	18	4	0	4
36852	Cusseta	34	8	0	8
368⁵4	Fairfax	30	33	4	37
36856	Fort Mitchell	6	53	6	59
36858	Hatchechubbee	21	5	1	6
36859	Holy Trinity	13	NL[4]	NL[4]	NL[4]
36860	Hurtsboro	30	2	0	2
36863	Lanett	35	34	9	43
36864	Langdale	31	6	1	7
36865	Loachapoka	40	2	0	2
36867	Phenix City	6	561	87	648
36868	Phenix City	6	NL[4]	NL[4]	NL[4]
36871	Pittsview	19	23	4	27
36872	River View	29	9	2	11
36874	Salem	21	90	7	97
36875	Seale	15	119	7	126
36876	Shawmut	33	8	3	11
36877	Smiths	13	132	16	148
ALABAMA TOTALS:			1,311	198	1,509

[1]Distance is measured in statute miles along a straight line from the geographic center of the zip code in which Martin Army Community Hospital is situated, 31905, to the geographic center of the zip code for the town indicated.

[2]The term ˙retiree˙ refers only to retired members of the U.S. Army. It does not include the dependents of U.S. Army retirees, or the retirees and dependents of other branches of the military service who may reside in the MACH CHAMPUS catchment area.

[3]The term ˙survivor˙ refers only to surviving spouses of U.S. Army retirees. It does not include any other dependents of U.S. Army retirees, surviving spouses of retirees from other branches of the military service, or dependents of retirees from other branches of the military service who may reside in the MACH CHAMPUS catchment area.

[4]The abbreviation ˙NL˙ stands for ˙Not Listed,˙ and means that no U.S. Army Retiree or surviving widows/widowers were listed for that particular zip code on the 5 February 1988 listing of the ˙Retired Army Personnel Roster-By Zip Code.˙

MACH CHAMPUS CATCHMENT AREA SUMMARY

I. ZIP CODES

    A. NUMBER OF ZIP CODES IN THE GEORGIA CATCHMENT AREA: 49
    B. NUMBER OF ZIP CODES IN THE ALABAMA CATCHMENT AREA: 24
    C. TOTAL NUMBER OF ZIP CODES IN THE CATCHMENT AREA: 73

II. RETIREES

    A. NUMBER OF RETIREES IN GEORGIA CATCHMENT AREA: 6,685
    B. NUMBER OF RETIREES IN ALABAMA CATCHMENT AREA: 1,311
    C. TOTAL NUMBER OF RETIREES IN THE CATCHMENT AREA: 7,996

III. SURVIVORS

    A. NUMBER OF SURVIVORS IN GEORGIA CATCHMENT AREA: 1,136
    B. NUMBER OF SURVIVORS IN ALABAMA CATCHMENT AREA: 198
    C. TOTAL NUMBER OF SURVIVORS IN THE CATCHMENT AREA: 1,334

IV. TOTAL POPULATION

    A. TOTAL NUMBER OF RETIREES IN THE CATCHMENT AREA: 7,996
    B. TOTAL NUMBER OF SURVIVORS IN THE CATCHMENT AREA: 1,334
    C. TOTAL RETIRED POPULATION IN THE CATCHMENT AREA: 9,330

APPENDIX G

SAMPLE SELECTED FROM THE MACH CHAMPUS

INPATIENT CATCHMENT AREA RETIREE POPULATION

LISTED BY ZIP CODE

STATE OF GEORGIA

ZIP CODE	TOWN	RETIREE[1] POPULATION	SAMPLE SIZE
30283	Stovall	1	0
31039	Howard	3	0
31058	Mauk	7	1
31081	Rupert	2	0
31721	Benevolence	1	0
31754	Georgetown	13	2
31780	Plains	8	0
31788	Springvale	NL[2]	0
31801	Box Springs	28	3
31803	Buena Vista	30	3
31804	Cataula	80	8
31805	Cusseta	105	11
31806	Ellaville	8	1
31807	Ellerslie	32	3
31808	Fortson	73	7
31810	Geneva	2	0
31811	Hamilton	41	4
31812	Junction City	9	1
31813	Juniper	NL[2]	0
31814	Louvale	NL[2]	0
31815	Lumpkin	11	1
31816	Manchester	23	3
31820	Midland	71	7
31821	Omaha	8	1
31822	Pine Mountain	16	1
31823	Pine Mountain Valley	24	3
31824	Preston	9	0
31825	Richland	16	2
31826	Shiloh	5	1
31827	Talbotton	11	1
31828	Tazewell	NL[2]	0
31829	Columbus	31	3
31830	Warm Springs	5	0
31831	Waverly Hall	60	6
31832	Weston	NL[2]	0
31833	West Point	49	5
31836	Woodland	7	1
31901	Columbus	74	7
31902	Columbus	66	7
31903	Columbus	1,705	170
31904	Bibb City	980	98
31905	Fort Benning	90	9
31906	Columbus	940	94
31907	Columbus	2,811	281
31908	Columbus	54	6
31909	Columbus	312	32
31998	Columbus	NL[2]	0
31999	Columbus	NL[2]	0
GEORGIA TOTALS:		**7,821**	**783**

STATE OF ALABAMA

ZIP CODE	TOWN NAME	RETIREE[1] POPULATION	SAMPLE SIZE
36027	Eufalula	NL[2]	0
36053	Midway	3	0
36801	Opelika	149	15
36803	Opelika	NL[2]	0
36830	Auburn	121	12
36831	Auburn	NL[2]	0
36851	Cottonton	4	1
36852	Cusseta	8	1
36854	Fairfax	37	3
36856	Fort Mitchell	59	6
36858	Hatchechubbee	6	1
36859	Holy Trinity	NL[2]	0
36860	Hurtsboro	2	0
36863	Lanett	43	4
36864	Langdale	7	1
36865	Loachapoka	2	0
36867	Phenix City	648	65
36868	Phenix City	NL[2]	0
36871	Pittsview	27	3
36872	River View	11	1
36874	Salem	97	9
36875	Seale	126	13
36876	Shawmut	11	1
36877	Smiths	148	15
ALABAMA TOTALS:		1,509	151

[1]The term 'retiree' refers to the population of retired members of the U.S. Army and surviving widows/widowers of U.S. Army retirees. It does not include any dependents of U.S. Army retirees other than surviving widows, or retirees of other branches of the military who reside in the MACH CHAMPUS catchment area, their dependents, or any surviving spouses.

[2]The abbreviation 'NL' stands for 'Not Listed,' and means that no U.S. Army Retiree or surviving widows/widowers were listed for that particular zip code on the 5 February 1988 listing of the 'Retired Army Personnel Roster-By Zip Code.'

SUMMARY

I. ZIP CODES

    A. NUMBER OF ZIP CODES IN THE GEORGIA CATCHMENT AREA: 49
    B. NUMBER OF ZIP CODES IN THE ALABAMA CATCHMENT AREA: <u>24</u>
    C. TOTAL NUMBER OF ZIP CODES IN THE CATCHMENT AREA: 73

II. RETIREE POPULATION

    A. RETIREE POPULATION IN THE GEORGIA CATCHMENT AREA: 7,821
    B. RETIREE POPULATION IN THE ALABAMA CATCHMENT AREA: <u>1,509</u>
    C. TOTAL RETIREE POPULATION IN THE CATCHMENT AREA: 9,330

III. SAMPLE POPULATION

    A. SAMPLE POPULATION DRAWN FROM GEORGIA: 783
    B. SAMPLE POPULATION DRAWN FROM ALABAMA: <u>151</u>
    C. TOTAL SAMPLE POPULATION DRAWN: 934

APPENDIX H

SAMPLE COVER LETTER, INSTRUCTIONS AND SIDPERS

ROSTER PROVIDED TO ACTIVE DUTY UNITS

DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY MEDICAL DEPARTMENT ACTIVITY
FORT BENNING, GEORGIA 31905-6100

HSXB (40)   4 May 1988

MEMORANDUM FOR: Commander, 553rd Transportation Company, Fort
Benning, Georgia 31905

SUBJECT: CHAMPUS Demonstration Project Questionnaire for Active
Duty Sponsors
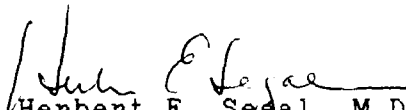
1.   I am committed to ensuring that Martin Army Community
Hospital meets the healthcare needs of Fort Benning's active duty
families. Yet with the budget limitations we are continually
experiencing, this is becoming increasingly difficult. One
option that I am currently exploring is the possibility of
becoming the custodian of the funds for the Civilian Health and
Medical Program of the Uniformed Services (CHAMPUS) within our
area. This would allow me to offer many more healthcare options
to active duty family members with greater flexibility to meet
individual needs.

2.   You can help in this effort by ensuring soldiers assigned to
the 553rd Transportation Company that have one or more family
members complete a short questionnaire regarding where their
family members, excluding themselves, are currently receiving
their healthcare. To assist you, a SIDPERS roster of soldiers in
your unit who are currently claiming to have one or more family
members has been attached. General instructions for
administering and collecting the questionnaires have also been
attached.

3.   Completing the questionnaire will take less than five minutes
of each soldier's time. The responses received will be an
invaluable aid in providing comprehensive healthcare to Fort
Benning family members. Your cooperation in this effort is
greatly appreciated.

3 Encls   Herbert E. Segal, M.D.
1. Instructions   Colonel, U.S. Army
2. SIDPERS Roster   Commanding
3. Questionnaires

QUESTIONNAIRE INSTRUCTIONS

1. A questionnaire has been provided for each of the soldiers whose name appears on the enclosed SIDPERS roster. If soldier is not available (field duty, TDY, leave, PCS, etc) destroy his/her uncompleted questionnaire. Please do not substitute other soldiers from the unit whose names are not listed on the roster. However do have your unit First Sergeant (or unit personnel clerk) indicate on the SIDPERS roster which soldiers were not available, and the reason why. Please return the roster along with the completed questionnaires from your unit.

2. The questionnaires provided may be administered to the soldiers in your unit in one of two ways:

    a. UNIT FORMATION: If it is more convenient for you, all of the questionnaires may be passed out at one time in a unit formation. If you use this method, please have your unit First Sergeant collect the questionnaires after the formation, and return them in the pre-addressed envelope provided.

    b. UNIT DISTRIBUTION: If it is more convenient for you, each soldier can be sent a questionnaire through your unit's distribution system. If you use this method, the soldier can either return the questionnaire to the unit First Sergeant, or fold, staple, and place the completed questionnaire in a post distribution box. All questionnaires have been stamped with a return address on the back, and will be returned to Martin Army Community Hospital.

3. Completion of the questionnaire should take approximately five minutes per soldier. Soldiers are not asked to provide their name, social security number, or any other means of identification; as a result, a privacy statement is not required.

4. Please ensure all completed questionnaires and the SIDPERS roster (annotated to indicate which soldiers were not available to complete a questionnaire) are returned within two weeks of receipt by your unit. As mentioned earlier, a pre-addressed envelope is provided for this purpose.

5. If you have any questions regarding these instructions or the questionnaire itself, please contact MAJ Foster at 544-2516/1512. Thank you for your assistance.

APPENDIX I

VARIABLES DEFINED FOR THE ACTIVE DUTY QUESTIONNAIRE

ACTIVE DUTY QUESTIONNAIRE

VARIABLE[1]	DESCRIPTION
RANK	Active Duty Sponsor's Rank
ZIPCODE	Local Address Zip Code
DISTANCE	Straight Line Distance From Local Address to MACH
FAMILY	Number of Family Members Living Within 40 Miles of MACH
DEERS	DEERS Registration for Family Members
INCOME	Total Annual Family Income
INSUR	Private Health Insurance
OVMACH	Office Visit to MACH
OVPVTMD	Office Visit to a Private MD
OVOTHER	Office Visit to an Other Healthcare Source
OVPERPMT	Office Visit Personal Payment
OVCHAPMT	Office Visit CHAMPUS Payment
OVMEDPMT	Office Visit MEDICARE Payment
OVINSPMT	Office Visit Private Insurance Payment
HMACH	Hospital Stay at MACH
HPRIVATE	Hospital Stay at a Private Hospital
HOTHER	Hospital Stay at an Other Healthcare Facility
HPERPMT	Hospital Stay Personal Payment
HCHAPMT	Hospital Stay CHAMPUS Payment
HMEDPMT	Hospital Stay MEDICARE Payment
HINSPMT	Hospital Stay Private Insurance Payment
INCOMSUM	Income Summary

APPENDIX J

VARIABLES DEFINED FOR THE RETIREE QUESTIONNAIRE

RETIREE QUESTIONNAIRE

VARIABLE[1]	DESCRIPTION
AGE	Age of Respondent
RANK	Retired Rank
ZIPCODE	Local Address Zip Code
DISTANCE	Straight Line Distance From Local Address to MACH
FAMILY	Number of Family Members Living Within 40 Miles of MACH
DEERS	DEERS Registration for Family Members
INCOME	Total Annual Family Income
INCOMSUM	Income Summary
ROVMACH	Retiree Office Visits to MACH
ROVPVTMD	Retiree Office Visits to a Private MD
ROVOTHER	Retiree Office Visits to another Healthcare Source
ROVPERPMT	Retiree Office Visit Personal Payment
ROVCHAPMT	Retiree Office Visit CHAMPUS Payment
ROVMEDPMT	Retiree Office Visit MEDICARE Payment
ROVINSPMT	Retiree Office Visit Private Insurance Payment
RHMACH	Retiree Hospital Stay at MACH
RHPRIVATE	Retiree Hospital Stay at a Private Hospital
RHOTHER	Retiree Hospital Stay at another Healthcare Facility
RHPERPMT	Retiree Hospital Stay Personal Payment
RHCHAPMT	Retiree Hospital Stay CHAMPUS Payment
RHMEDPMT	Retiree Hospital Stay MEDICARE Payment
RHINSPMT	Retiree Hospital Stay Private Insurance Payment
DOVMACH	Dependent Office Visits to MACH
DOVPVTMD	Dependent Office Visits to a Private MD
DOVOTHER	Dependent Office Visits to another Healthcare Source
DOVPERPMT	Dependent Office Visit Personal Payment
DOVCHAPMT	Dependent Office Visit CHAMPUS Payment
DOVMEDPMT	Dependent Office Visit MEDICARE Payment
DOVINSPMT	Dependent Office Visit Private Insurance Payment
DHMACH	Dependent Hospital Stay at MACH
DHPRIVATE	Dependent Hospital Stay at a Private Hospital
DHOTHER	Dependent Hospital Stay at another Healthcare Facility
DHPERPMT	Dependent Hospital Stay Personal Payment
DHCHAPMT	Dependent Hospital Stay CHAMPUS Payment
DHMEDPMT	Dependent Hospital Stay MEDICARE Payment
DHINSPMT	Dependent Hospital Stay Private Insurance Payment
INSUR	Private Health Insurance

[1]Variables are listed in the same order they were created on the SPSS/PC+ Data Entry software program.

APPENDIX K

VALUE LABELS DEFINED FOR VARIABLES USED WITH

THE ACTIVE DUTY QUESTIONNAIRE

Variable: RANK   Label: Soldier's Rank
    Value labels follow   Type: Number   Width: 2 Dec: 0   Missing: 0.0
        1.00   E1-E2   2.00   E3
        3.00   E4   4.00   E5-E6
        5.00   E7-E9   6.00   W1-02
        7.00   03   8.00   04-05
        9.00   06-010

Variable: ZIPCODE   Label: Local Address
    No value labels   Type: Number   Width: 5 Dec: 0   Missing: 0.0

Variable: DISTANCE   Label: Distance to MACH
    Value labels follow   Type: Number   Width: 1 Dec: 0   Missing: 0.0
        1.00   0 to 10 Miles   2.00   11 to 20 Miles
        3.00   21 to 30 Miles   4.00   31 to 40 Miles

Variable: FAMILY   Label: Number Family Members
    No value labels   Type: Number   Width: 2 Dec: 0   Missing: 0.0

Variable: DEERS   Label: Family DEERS Reg
    Value labels follow   Type: Number   Width: 1 Dec: 0   Missing: 0.0
        1.00   Yes   2.00   No
        3.00   Don't Know

Variable: INCOME   Label: Family Income/Year
    No value labels   Type: Number   Width: 6 Dec: 0   Missing: 0.0

Variable: INSUR   Label: Private Health Insurance
    Value labels follow   Type: Number   Width: 1 Dec: 0   Missing: 0.0
        0.0   Missing   1.00   None
        2.00   Supplemental Only   3.00   Comprehensive Only
        4.00   Suppl + Comp

Variable: OVMACH   Label: Off Visit MACH
    Value labels follow   Type: Number   Width: 1 Dec: 0   Missing: 0.0
        1.00   ALL   2.00   MOST
        3.00   HALF   4.00   LITTLE
        5.00   NONE   .   N/A

Variable: OVPVTMD   Label: Off Visit Pvt MD
    Value labels follow   Type: Number   Width: 1 Dec: 0   Missing: 0.0
        1.00   ALL   2.00   MOST
        3.00   HALF   4.00   LITTLE
        5.00   NONE   .   N/A

Variable: OVOTHER   Label: Off Visit Other
    Value labels follow   Type: Number   Width: 1 Dec: 0   Missing: 0.0

```
        1.00    ALL                              2.00    MOST
```

```
        3.00    HALF                             4.00    LITTLE
        5.00    NONE                              .      N/A
```

Variable: OVPERPMT   Label: Off Visit Pers Pmt
  Value labels follow   Type: Number Width: 1 Dec: 0   Missing: 0.0
        1.00   ALL   2.00   MOST
        3.00   HALF   4.00   LITTLE
        5.00   NONE   .   N/A

Variable: OVCHAPMT   Label: Off Visit CHAMPUS Pmt
  Value labels follow   Type: Number Width: 1 Dec: 0   Missing: 0.0
        1.00   ALL   2.00   MOST
        3.00   HALF   4.00   LITTLE
        5.00   NONE   .   N/A

Variable: OVMEDPMT   Label: Off Visit MEDICARE Pmt
  Value labels follow   Type: Number Width: 1 Dec: 0   Missing: 0.0
        1.00   ALL   2.00   MOST
        3.00   HALF   4.00   LITTLE
        5.00   NONE   .   N/A

Variable: OVINSPMT   Label: Off Visit Pvt Ins Pmt
  Value labels follow   Type: Number Width: 1 Dec: 0   Missing: 0.0
        1.00   ALL   2.00   MOST
        3.00   HALF   4.00   LITTLE
```
-------------------------------------------------------------------------------
```
        5.00   NONE   .   N/A
```

Variable: HMACH         Label: Hospital MACH
  Value labels follow   Type: Number  Width:   1  Dec: 0      Missing:      0.0
         .      N/A                              1.00    ALL
        2.00    MOST                             3.00    HALF
        4.00    LITTLE                           5.00    NONE

Variable: HPRIVATE      Label: Hospital Private
  Value labels follow   Type: Number  Width:   1  Dec: 0      Missing:      0.0
         .      N/A                              1.00    ALL
        2.00    MOST                             3.00    HALF
        4.00    LITTLE                           5.00    NONE

Variable: HOTHER        Label: Hospital Other
  Value labels follow   Type: Number  Width:   1  Dec: 0      Missing:      0.0
         .      N/A                              1.00    ALL
        2.00    MOST                             3.00    HALF
        4.00    LITTLE                           5.00    NONE

Variable: HPERPMT       Label: Hospital Pers Pmt
  Value labels follow   Type: Number  Width:   2  Dec: 0      Missing:      0.0
         .      N/A                              1.00    ALL
        2.00    MOST                             3.00    HALF

```
    4.00   LITTLE   5.00   NONE
```
--------------------------------------------------------------------------

Variable: HCHAPMT          Label: Hospital CHAMPUS Pmt
  Value labels follow    Type: Number   Width:   1  Dec: 0      Missing:      0.0
        .      N/A                                1.00    ALL
  2.00    MOST                               3.00    HALF
  4.00    LITTLE                             5.00    NONE


Variable: HMEDPMT          Label: Hospital MEDICARE Pmt
  Value labels follow    Type: Number   Width:   1  Dec: 0      Missing:      0.0
        .      N/A                                1.00    ALL
  2.00    MOST                               3.00    HALF
  4.00    LITTLE                             5.00    NONE


Variable: HINSPMT          Label: Hospital Pvt Ins Pmt
  Value labels follow    Type: Number   Width:   1  Dec: 0      Missing:      0.0
        .      N/A                                1.00    ALL
  2.00    MOST                               3.00    HALF
  4.00    LITTLE                             5.00    NONE


Variable: INCOMSUM         Label: Income Summary
  Value labels follow    Type: Number   Width:   1  Dec: 0      Missing:      0.0
        .      N/A                                1.00    < #15,000
  2.00    #15,000-#29,999.99                 3.00    > #30,000

APPENDIX L

VALUE LABELS DEFINED FOR VARIABLES USED WITH

THE RETIREE QUESTIONNAIRE

---

Variable: AGE            Label: Age of Respondent
  No value labels        Type: Number  Width:  2  Dec: 0     Missing:      0.0

Variable: RANK           Label: Retired Rank
  Value labels follow    Type: Number  Width:  2  Dec: 0     Missing:      0.0
      1.00    E1-E2                            2.00    E3
      3.00    E4                               4.00    E5-E6
      5.00    E7-E9                            6.00    W1-O2
      7.00    O3                               8.00    O4-O5
      9.00    O6-O10                          10.00    Deceased

Variable: ZIPCODE        Label: Local Address
  No value labels        Type: Number  Width:  5  Dec: 0     Missing:      0.0

Variable: DISTANCE       Label: Distance to MACH
  Value labels follow    Type: Number  Width:  1  Dec: 0     Missing:      0.0
      1.00    0 to 10 Miles                    2.00    11 to 20 Miles
      3.00    21 to 30 Miles                   4.00    31 to 40 Miles

Variable: FAMILY         Label: Number of Family Members
  Value labels follow    Type: Number  Width:  1  Dec: 0     Missing:      0.0
        .     None                             1.00    One
      2.00    Two                              3.00    Three
      4.00    Four                             5.00    Five

---

      6.00    Six                              7.00    Seven
      8.00    Eight                            9.00    Nine or More

Variable: DEERS          Label: DEERS Registration
  Value labels follow    Type: Number  Width:  1  Dec: 0     Missing:      0.0
      1.00    Yes                              2.00    No
      3.00    Don't Know

Variable: INCOME         Label: Family Income/Year
  No value labels        Type: Number  Width:  6  Dec: 0     Missing:      0.0

Variable: INCOMSUM       Label: Income Summary
  Value labels follow    Type: Number  Width:  1  Dec: 0     Missing:      0.0
      1.00    < #15,000.00                     2.00    #15,000.00-#29,999.99
      3.00    > #30,000

Variable: ROVMACH        Label: Ret Off Visit MACH
  Value labels follow    Type: Number  Width:  1  Dec: 0     Missing:      0.0
        .     N/A                              1.00    ALL
      2.00    MOST                             3.00    HALF
      4.00    LITTLE                           5.00    NONE

Variable: ROVPVTMD       Label: Ret Off Visit Pvt MD
  Value labels follow    Type: Number  Width:  1  Dec: 0     Missing:      0.0

```
             .   N/A   1.00   ALL
```
---
```
           2.00   MOST   3.00   HALF
           4.00   LITTLE   5.00   NONE
```

```
Variable: ROVOTHER       Label: Ret Off Visit Other
  Value labels follow    Type: Number   Width:  1  Dec: 0      Missing:      0.0
             .       N/A                        1.00     ALL
           2.00     MOST                        3.00     HALF
           4.00     LITTLE                      5.00     NONE
```

```
Variable: ROVPPMT        Label: Ret Off Visit Pers Pmt
  Value labels follow    Type: Number   Width:  1  Dec: 0      Missing:      0.0
             .       N/A                        1.00     ALL
           2.00     MOST                        3.00     HALF
           4.00     LITTLE                      5.00     NONE
```

```
Variable: ROVCPMT        Label: Ret Off Visit CHAMPUS Pmt
  Value labels follow    Type: Number   Width:  1  Dec: 0      Missing:      0.0
             .       N/A                        1.00     ALL
           2.00     MOST                        3.00     HALF
           4.00     LITTLE                      5.00     NONE
```

```
Variable: ROVMPMT        Label: Ret Off Visit MEDICARE Pmt
  Value labels follow    Type: Number   Width:  1  Dec: 0      Missing:      0.0
             .       N/A                        1.00     ALL
           2.00     MOST                        3.00     HALF
```

```
           4.00     LITTLE                      5.00     NONE
```

```
Variable: ROVIOMT        Label: Ret Off Visit Ins Pmt
  Value labels follow    Type: Number   Width:  1  Dec: 0      Missing:      0.0
             .       N/A                        1.00     ALL
           2.00     MOST                        3.00     HALF
           4.00     LITTLE                      5.00     NONE
```

```
Variable: RHMACH         Label: Ret Hospital MACH
  Value labels follow    Type: Number   Width:  1  Dec: 0      Missing:      0.0
             .       N/A                        1.00     ALL
           2.00     MOST                        3.00     HALF
           4.00     LITTLE                      5.00     NONE
```

```
Variable: RPVTH          Label: Ret Pvt Hospital
  Value labels follow    Type: Number   Width:  1  Dec: 0      Missing:      0.0
             .       N/A                        1.00     ALL
           2.00     MOST                        3.00     HALF
           4.00     LITTLE                      5.00     NONE
```

```
Variable: ROTHERH        Label: Ret Other Hospital
  Value labels follow    Type: Number   Width:  1  Dec: 0      Missing:      0.0
             .       N/A                        1.00     ALL
           2.00     MOST                        3.00     HALF
```

```
   4.00   LITTLE                              5.00   NONE
```

```
Variable: RHPERPMT        Label: Ret Hos Pers Pmt
  Value labels follow     Type: Number   Width:   1  Dec: 0      Missing:      0.0
         .    N/A                                1.00    ALL
    2.00   MOST                                  3.00    HALF
    4.00   LITTLE                                5.00    NONE


Variable: RHCPMT          Label: Ret Hosp CHAMPUS Pmt
  Value labels follow     Type: Number   Width:   1  Dec: 0      Missing:      0.0
         .    N/A                                1.00    ALL
    2.00   MOST                                  3.00    HALF
    4.00   LITTLE                                5.00    NONE


Variable: RHMPMT          Label: Ret Hosp MEDICARE Pmt
  Value labels follow     Type: Number   Width:   1  Dec: 0      Missing:      0.0
         .    N/A                                1.00    ALL
    2.00   MOST                                  3.00    HALF
    4.00   LITTLE                                5.00    NONE


Variable: RHIPMT          Label: Ret Hosp Ins Pmt
  Value labels follow     Type: Number   Width:   1  Dec: 0      Missing:      0.0
         .    N/A                                1.00    ALL
    2.00   MOST                                  3.00    HALF
    4.00   LITTLE                                5.00    NONE
```

```
Variable: DOVMACH         Label: Dep Off Visit MACH
  Value labels follow     Type: Number   Width:   1  Dec: 0      Missing:      0.0
         .    N/A                                1.00    ALL
    2.00   MOST                                  3.00    HALF
    4.00   LITTLE                                5.00    NONE


Variable: DOVPVTMD        Label: Dep Off Visit Pvt MD
  Value labels follow     Type: Number   Width:   1  Dec: 0      Missing:      0.0
         .    N/A                                1.00    ALL
    2.00   MOST                                  3.00    HALF
    4.00   LITTLE                                5.00    NONE


Variable: DOVOTHER        Label: Dep Off Visit Other
  Value labels follow     Type: Number   Width:   1  Dec: 0      Missing:      0.0
         .    N/A                                1.00    ALL
    2.00   MOST                                  3.00    HALF
    4.00   LITTLE                                5.00    NONE


Variable: DOVPPMT         Label: Dep Off Visit Pers Pmt
  Value labels follow     Type: Number   Width:   1  Dec: 0      Missing:      0.0
         .    N/A                                1.00    ALL
    2.00   MOST                                  3.00    HALF
```

```
        4.00    LITTLE                              5.00    NONE
```

Variable: DOVCPMT   Label: Dep Off Visit CHAMPUS Pmt
  Value labels follow   Type: Number   Width: 1 Dec: 0   Missing: 0.0
        .   N/A   1.00   ALL
        2.00   MOST   3.00   HALF
        4.00   LITTLE   5.00   NONE

Variable: DOVMPMT   Label: Dep Off Visit MEDICARE Pmt
  Value labels follow   Type: Number   Width: 1 Dec: 0   Missing: 0.0
        .   N/A   1.00   ALL
        2.00   MOST   3.00   HALF
        4.00   LITTLE   5.00   NONE

Variable: DOVIPMT   Label: Dep Off Visit Ins Pmt
  Value labels follow   Type: Number   Width: 1 Dec: 0   Missing: 0.0
        .   N/A   1.00   ALL
        2.00   MOST   3.00   HALF
        4.00   LITTLE   5.00   NONE

Variable: DHMACH   Label: Dep Hosp MACH
  Value labels follow   Type: Number   Width: 1 Dec: 0   Missing: 0.0
        .   N/A   1.00   ALL
        2.00   MOST   3.00   HALF
        4.00   LITTLE   5.00   NONE
```
--------------------------------------------------------------------------------

Variable: DPVTH          Label: Dep Pvt Hosp
  Value labels follow    Type: Number   Width:  1  Dec: 0    Missing:    0.0
        .        N/A                             1.00    ALL
        2.00    MOST                             3.00    HALF
        4.00    LITTLE                           5.00    NONE

Variable: DOTHERH        Label: Dep Other Hosp
  Value labels follow    Type: Number   Width:  1  Dec: 0    Missing:    0.0
        .        N/A                             1.00    ALL
        2.00    MOST                             3.00    HALF
        4.00    LITTLE                           5.00    NONE

Variable: DHPPMT         Label: Dep Hosp Pers Pmt
  Value labels follow    Type: Number   Width:  1  Dec: 0    Missing:    0.0
        .        N/A                             1.00    ALL
        2.00    MOST                             3.00    HALF
        4.00    LITTLE                           5.00    NONE

Variable: DHCPMT         Label: Dep Hosp CHAMPUS Pmt
  Value labels follow    Type: Number   Width:  1  Dec: 0    Missing:    0.0
        .        N/A                             1.00    ALL
        2.00    MOST                             3.00    HALF

        4.00    LITTLE                              5.00    NONE
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
Page   24                          SPSS/PC+                              7/7/88

Variable: DHMPMT          Label: Dep Hosp MEDICARE Pmt
   Value labels follow    Type: Number   Width:  1  Dec: 0      Missing:      0.0
            .      N/A                                1.00    ALL
        2.00    MOST                                 3.00    HALF
        4.00    LITTLE                               5.00    NONE


Variable: DHIPMT          Label: Dep Hosp Ins Pmt
   Value labels follow    Type: Number   Width:  1  Dec: 0      Missing:      0.0
            .      N/A                                1.00    ALL
        2.00    MOST                                 3.00    HALF
        4.00    LITTLE                               5.00    NONE


Variable: INSUR           Label: Private Health Insurance
   Value labels follow    Type: Number   Width:  1  Dec: 0      Missing:      0.0
        1.00    None                                 2.00    Supplemental Only
        3.00    Comprehensive Only                   4.00    Suppl + Comp
        5.00    Unknown Type

APPENDIX M

RANGES DEFINED FOR VARIABLES USED

WITH THE ACTIVE DUTY QUESTIONNAIRE

## ACTIVE DUTY QUESTIONNAIRE

| VARIABLE[1] | RANGE[2] |
|---|---|
| RANK | 0 thru 9 |
| ZIPCODE | 0, 30823, 31039, 31058, 31081, 31721, 31754, 31780, 31788, 31801, 31803 thru 31808, 31810 thru 31815, 31820 thru 31833, 31836, 31901 thru 31909, 31998, 31999, 36027, 36053, 36801, 36803, 36830, 36831, 36851, 36852, 36854, 36856, 36858 thru 36860, 36863 thru 36868, 36871 thru 36877 |
| DISTANCE | 0 thru 4 |
| FAMILY | 0 thru 9 |
| DEERS | 0 thru 3 |
| INCOME | 0 thru 100000 |
| INSUR | 0 thru 4 |
| OVMACH | 0 thru 5, .[3] |
| OVPVTMD | 0 thru 5, . |
| OVOTHER | 0 thru 5, . |
| OVPERPMT | 0 thru 5, . |
| OVCHAPMT | 0 thru 5, . |
| OVMEDPMT | 0 thru 5, . |
| OVINSPMT | 0 thru 5, . |
| HMACH | 0 thru 5, . |
| HPRIVATE | 0 thru 5, . |
| HOTHER | 0 thru 5, . |
| HPERPMT | 0 thru 5, . |
| HCHAPMT | 0 thru 5, . |
| HMEDPMT | 0 thru 5, . |
| HINSPMT | 0 thru 5, . |
| INCOMSUM | 0 thru 3 |

APPENDIX N

RANGES DEFINED FOR VARIABLES USED

WITH THE RETIREE QUESTIONNAIRE

## RETIREE QUESTIONNAIRE

| VARIABLE[1] | RANGE[2] |
|---|---|
| AGE | 0 thru 99 |
| RANK | 0 thru 10 |
| ZIPCODE | 0, 31058, 31754, 31801, 31803 thru 31808, 31811, 31812, 31815, 31816, 31820 thru 31823, 31824 thru 31827, 31829, 31831, 31833, 31836, 31901 thru 31909, 36801, 36830, 36851, 36852, 36854, 36856, 36858, 36863, 36864, 36867, 36871, 26872, 36874 thru 36877 |
| DISTANCE | 0 thru 4 |
| FAMILY | 0 thru 9 |
| DEERS | 0 thru 3 |
| INCOME | 0 thru 200000 |
| INCOMSUM | 0 thru 3 |
| ROVMACH | 0 thru 5, . |
| ROVPVTMD | 0 thru 5, . |
| ROVOTHER | 0 thru 5, . |
| ROVPERPMT | 0 thru 5, . |
| ROVCHAPMT | 0 thru 5, . |
| ROVMEDPMT | 0 thru 5, . |
| ROVINSPMT | 0 thru 5, . |
| RHMACH | 0 thru 5, . |
| RHPRIVATE | 0 thru 5, . |
| RHOTHER | 0 thru 5, . |
| RHPERPMT | 0 thru 5, . |
| RHCHAPMT | 0 thru 5, . |
| RHMEDPMT | 0 thru 5, . |
| RHINSPMT | 0 thru 5, . |
| DOVMACH | 0 thru 5, . |
| DOVPVTMD | 0 thru 5, . |
| DOVOTHER | 0 thru 5, . |
| DOVPERPMT | 0 thru 5, . |
| DOVCHAPMT | 0 thru 5, . |
| DOVMEDPMT | 0 thru 5, . |
| DOVINSPMT | 0 thru 5, . |
| DHMACH | 0 thru 5, . |
| DHPRIVATE | 0 thru 5, . |
| DHOTHER | 0 thru 5, . |
| DHPERPMT | 0 thru 5, . |
| DHCHAPMT | 0 thru 5, . |
| DHMEDPMT | 0 thru 5, . |
| DHINSPMT | 0 thru 5, . |
| INSUR | 0 thru 4 |

[1]Variables are listed in the same order they were created on the SPSS/PC+ Data Entry software program.

[2]Ranges are shown exactly as entered onto the SPSS/PC+ Data Entry program. The word `thru` was used by the program to specify an inclusive range of values.

[3]The symbol `.` was used to specify that the respondent had indicated the variable being entered was not applicable. The SPSS/PC+ Data Entry program treated the symbol `.` as a missing value.

APPENDIX O

DESCRIPTIVE STATISTICS AND FREQUENCY DISTRIBUTIONS

FOR THE ACTIVE DUTY QUESTIONNAIRE

Number of Valid Observations (Listwise) =           0.0

| Variable | Mean | Std Dev | Minimum | Maximum | N | Label |
|---|---|---|---|---|---|---|
| RANK | 4.36 | 1.34 | 1 | 8 | 217 | Soldier's Rank |
| ZIPCODE | 32225.46 | 1221.72 | 31901 | 36875 | 217 | Local Address |
| DISTANCE | 1.06 | .28 | 1 | 4 | 217 | Distance to MACH |
| FAMILY | 2.63 | 1.09 | 1 | 6 | 217 | Number Family Member |
| DEERS | 1.17 | .52 | 1 | 3 | 214 | Family DEERS Reg |
| INCOME | 21196.81 | 9919.39 | 4000 | 54000 | 188 | Family Income/Year |
| INSUR | 2.47 | 1.25 | 1 | 4 | 62 | Private Health Insur |
| OVMACH | 1.79 | 1.09 | 1 | 4 | 175 | Off Visit MACH |
| OVPVTMD | 3.00 | 1.12 | 1 | 4 | 52 | Off Visit Pvt MD |
| OVOTHER | 2.50 | 1.41 | 1 | 4 | 22 | Off Visit Other |
| OVPERPMT | 1.98 | 1.32 | 1 | 4 | 65 | Off Visit Pers Pmt |
| OVCHAPMT | 2.15 | 1.20 | 1 | 4 | 59 | Off Visit CHAMPUS Pm |
| OVMEDPMT | 2.67 | 1.15 | 2 | 4 | 3 | Off Visit MEDICARE P |
| OVINSPMT | 2.44 | 1.33 | 1 | 4 | 9 | Off Visit Pvt Ins Pm |
| HMACH | 1.49 | .96 | 1 | 4 | 110 | Hospital MACH |
| HPRIVATE | 2.30 | 1.33 | 1 | 4 | 23 | Hospital Private |
| HOTHER | 2.33 | 1.37 | 1 | 4 | 6 | Hospital Other |
| HPERPMT | 2.36 | 1.32 | 1 | 4 | 25 | Hospital Pers Pmt |
| HCHAPMT | 1.88 | 1.08 | 1 | 4 | 41 | Hospital CHAMPUS Pmt |

Number of Valid Observations (Listwise) =           0.0

| Variable | Mean | Std Dev | Minimum | Maximum | N | Label |
|---|---|---|---|---|---|---|
| HMEDPMT | 2.67 | 1.15 | 2 | 4 | 3 | Hospital MEDICARE Pm |
| HINSPMT | 2.67 | 1.21 | 1 | 4 | 6 | Hospital Pvt Ins Pmt |
| INCOMSUM | 1.91 | .71 | 1 | 3 | 188 | Income Summary |

---

RANK       Soldier's Rank

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| E1-E2 | 1 | 1 | .5 | .5 | .5 |
| E3 | 2 | 9 | 4.1 | 4.1 | 4.6 |
| E4 | 3 | 36 | 16.6 | 16.6 | 21.2 |
| E5-E6 | 4 | 98 | 45.2 | 45.2 | 66.4 |
| E7-E9 | 5 | 39 | 18.0 | 18.0 | 84.3 |
| W1-O2 | 6 | 14 | 6.5 | 6.5 | 90.8 |
| O3 | 7 | 11 | 5.1 | 5.1 | 95.9 |
| O4-O5 | 8 | 9 | 4.1 | 4.1 | 100.0 |
| | TOTAL | 217 | 100.0 | 100.0 | |

Valid Cases      217      Missing Cases      0

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ZIPCODE    Local Address

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| | 31901 | 1 | .5 | .5 | .5 |
| | 31903 | 19 | 8.8 | 8.8 | 9.2 |
| | 31904 | 3 | 1.4 | 1.4 | 10.6 |
| | 31905 | 117 | 53.9 | 53.9 | 64.5 |
| | 31906 | 16 | 7.4 | 7.4 | 71.9 |
| | 31907 | 43 | 19.8 | 19.8 | 91.7 |
| | 31909 | 4 | 1.8 | 1.8 | 93.5 |
| | 36801 | 1 | .5 | .5 | 94.0 |
| | 36867 | 5 | 2.3 | 2.3 | 96.3 |
| | 36875 | 8 | 3.7 | 3.7 | 100.0 |
| | TOTAL | 217 | 100.0 | 100.0 | |

Valid Cases      217      Missing Cases      0

---

DISTANCE   Distance to MACH

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| 0 to 10 Miles | 1 | 207 | 95.4 | 95.4 | 95.4 |
| 11 to 20 Miles | 2 | 9 | 4.1 | 4.1 | 99.5 |
| 31 to 40 Miles | 4 | 1 | .5 | .5 | 100.0 |
| | TOTAL | 217 | 100.0 | 100.0 | |

Valid Cases    217    Missing Cases    0

------------------------------------------------------------

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FAMILY    Number Family Members

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| | 1 | 38 | 17.5 | 17.5 | 17.5 |
| | 2 | 56 | 25.8 | 25.8 | 43.3 |
| | 3 | 83 | 38.2 | 38.2 | 81.6 |
| | 4 | 32 | 14.7 | 14.7 | 96.3 |
| | 5 | 5 | 2.3 | 2.3 | 98.6 |
| | 6 | 3 | 1.4 | 1.4 | 100.0 |
| | TOTAL | 217 | 100.0 | 100.0 | |

Valid Cases    217    Missing Cases    0

------------------------------------------------------------

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DEERS    Family DEERS Reg

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| Yes | 1 | 191 | 88.0 | 89.3 | 89.3 |
| No | 2 | 9 | 4.1 | 4.2 | 93.5 |
| Don't Know | 3 | 14 | 6.5 | 6.5 | 100.0 |
| | 0 | 3 | 1.4 | MISSING | |
| | TOTAL | 217 | 100.0 | 100.0 | |

Valid Cases    214    Missing Cases    3

------------------------------------------------------------

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INCOME    Family Income/Year

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| | 4000 | 1 | .5 | .5 | .5 |
| | 7000 | 1 | .5 | .5 | 1.1 |
| | 8000 | 3 | 1.4 | 1.6 | 2.7 |
| | 9000 | 3 | 1.4 | 1.6 | 4.3 |
| | 10000 | 9 | 4.1 | 4.8 | 9.0 |
| | 11000 | 6 | 2.8 | 3.2 | 12.2 |
| | 12000 | 12 | 5.5 | 6.4 | 18.6 |
| | 13000 | 14 | 6.5 | 7.4 | 26.1 |
| | 14000 | 8 | 3.7 | 4.3 | 30.3 |
| | 15000 | 11 | 5.1 | 5.9 | 36.2 |
| | 16000 | 10 | 4.6 | 5.3 | 41.5 |
| | 17000 | 3 | 1.4 | 1.6 | 43.1 |
| | 18000 | 7 | 3.2 | 3.7 | 46.8 |
| | 19000 | 4 | 1.8 | 2.1 | 48.9 |
| | 20000 | 14 | 6.5 | 7.4 | 56.4 |
| | 21000 | 5 | 2.3 | 2.7 | 59.0 |
| | 22000 | 8 | 3.7 | 4.3 | 63.3 |

|  | 23000 | 5 | 2.3 | 2.7 | 66.0 |
|--|-------|---|-----|-----|------|

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INCOME      Family Income/Year

|  | 24000 | 11 | 5.1 | 5.9 | 71.8 |
|--|-------|----|-----|-----|------|
|  | 25000 | 6 | 2.8 | 3.2 | 75.0 |
|  | 26000 | 1 | .5 | .5 | 75.5 |
|  | 27000 | 1 | .5 | .5 | 76.1 |
|  | 28000 | 4 | 1.8 | 2.1 | 78.2 |
|  | 29000 | 2 | .9 | 1.1 | 79.3 |
|  | 30000 | 12 | 5.5 | 6.4 | 85.6 |
|  | 31000 | 1 | .5 | .5 | 86.2 |
|  | 32000 | 1 | .5 | .5 | 86.7 |
|  | 33000 | 2 | .9 | 1.1 | 87.8 |
|  | 35000 | 3 | 1.4 | 1.6 | 89.4 |
|  | 36000 | 4 | 1.8 | 2.1 | 91.5 |
|  | 38000 | 2 | .9 | 1.1 | 92.6 |
|  | 40000 | 4 | 1.8 | 2.1 | 94.7 |
|  | 41000 | 1 | .5 | .5 | 95.2 |
|  | 42000 | 3 | 1.4 | 1.6 | 96.8 |
|  | 45000 | 1 | .5 | .5 | 97.3 |
|  | 48000 | 2 | .9 | 1.1 | 98.4 |
|  | 50000 | 1 | .5 | .5 | 98.9 |
|  | 52000 | 1 | .5 | .5 | 99.5 |
|  | 54000 | 1 | .5 | .5 | 100.0 |
|  | 0 | 29 | 13.4 | MISSING |  |

---

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INCOME      Family Income/Year

|  | TOTAL | 217 | 100.0 | 100.0 |
|--|-------|-----|-------|-------|

Valid Cases      188      Missing Cases     29

---

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INSUR       Private Health Insurance

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|-------------|-------|-----------|---------|---------------|-------------|
| None | 1 | 20 | 9.2 | 32.3 | 32.3 |
| Supplemental Only | 2 | 13 | 6.0 | 21.0 | 53.2 |
| Comprehensive Only | 3 | 9 | 4.1 | 14.5 | 67.7 |
| Suppl + Comp | 4 | 20 | 9.2 | 32.3 | 100.0 |
| Missing | 0 | 155 | 71.4 | MISSING |  |
|  | TOTAL | 217 | 100.0 | 100.0 |  |

Valid Cases        62    Missing Cases    155
------------------------------------------------------------------------
Page  16                      SPSS/PC+                           7/8/88

OVMACH     Off Visit MACH

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| ALL | 1 | 99 | 45.6 | 56.6 | 56.6 |
| MOST | 2 | 40 | 18.4 | 22.9 | 79.4 |
| HALF | 3 | 9 | 4.1 | 5.1 | 84.6 |
| LITTLE | 4 | 27 | 12.4 | 15.4 | 100.0 |
| N/A | . | 27 | 12.4 | MISSING | |
| | 0 | 15 | 6.9 | MISSING | |
| | TOTAL | 217 | 100.0 | 100.0 | |

Valid Cases       175    Missing Cases     42
------------------------------------------------------------------------
Page  17                      SPSS/PC+                           7/8/88

OVPVTMD    Off Visit Pvt MD

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| ALL | 1 | 6 | 2.8 | 11.5 | 11.5 |
| MOST | 2 | 14 | 6.5 | 26.9 | 38.5 |
| HALF | 3 | 6 | 2.8 | 11.5 | 50.0 |
| LITTLE | 4 | 26 | 12.0 | 50.0 | 100.0 |
| N/A | . | 137 | 63.1 | MISSING | |
| | 0 | 28 | 12.9 | MISSING | |
| | TOTAL | 217 | 100.0 | 100.0 | |

Valid Cases        52    Missing Cases    165
------------------------------------------------------------------------
Page  18                      SPSS/PC+                           7/8/88

OVOTHER    Off Visit Other

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| ALL | 1 | 9 | 4.1 | 40.9 | 40.9 |
| MOST | 2 | 2 | .9 | 9.1 | 50.0 |
| HALF | 3 | 2 | .9 | 9.1 | 59.1 |
| LITTLE | 4 | 9 | 4.1 | 40.9 | 100.0 |
| N/A | . | 153 | 70.5 | MISSING | |
| | 0 | 42 | 19.4 | MISSING | |
| | TOTAL | 217 | 100.0 | 100.0 | |

Valid Cases      22      Missing Cases    195

---

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OVPERPMT   Off Visit Pers Pmt

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| ALL | 1 | 39 | 18.0 | 60.0 | 60.0 |
| MOST | 2 | 5 | 2.3 | 7.7 | 67.7 |
| HALF | 3 | 4 | 1.8 | 6.2 | 73.8 |
| LITTLE | 4 | 17 | 7.8 | 26.2 | 100.0 |
| N/A | . | 111 | 51.2 | MISSING | |
| | 0 | 41 | 18.9 | MISSING | |
| | TOTAL | 217 | 100.0 | 100.0 | |

Valid Cases      65      Missing Cases    152

---

Page  20                          SPSS/PC+                            7/8/88

OVCHAPMT   Off Visit CHAMPUS Pmt

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| ALL | 1 | 24 | 11.1 | 40.7 | 40.7 |
| MOST | 2 | 16 | 7.4 | 27.1 | 67.8 |
| HALF | 3 | 5 | 2.3 | 8.5 | 76.3 |
| LITTLE | 4 | 14 | 6.5 | 23.7 | 100.0 |
| N/A | . | 114 | 52.5 | MISSING | |
| | 0 | 44 | 20.3 | MISSING | |
| | TOTAL | 217 | 100.0 | 100.0 | |

Valid Cases      59      Missing Cases    158

---

Page  21                          SPSS/PC+                            7/8/88

OVMEDPMT   Off Visit MEDICARE Pmt

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| MOST | 2 | 2 | .9 | 66.7 | 66.7 |
| LITTLE | 4 | 1 | .5 | 33.3 | 100.0 |
| N/A | . | 158 | 72.8 | MISSING | |
| | 0 | 56 | 25.8 | MISSING | |
| | TOTAL | 217 | 100.0 | 100.0 | |

Valid Cases      3      Missing Cases    214

---

Page  22                          SPSS/PC+                          7/8/88

OVINSPMT   Off Visit Pvt Ins Pmt

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| ALL | 1 | 3 | 1.4 | 33.3 | 33.3 |
| MOST | 2 | 2 | .9 | 22.2 | 55.6 |
| HALF | 3 | 1 | .5 | 11.1 | 66.7 |
| LITTLE | 4 | 3 | 1.4 | 33.3 | 100.0 |
| N/A | . | 154 | 71.0 | MISSING | |
|  | 0 | 54 | 24.9 | MISSING | |
|  | TOTAL | 217 | 100.0 | 100.0 | |

Valid Cases      9      Missing Cases    208

---

Page  23                          SPSS/PC+                          7/8/88

HMACH      Hospital MACH

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| ALL | 1 | 83 | 38.2 | 75.5 | 75.5 |
| MOST | 2 | 10 | 4.6 | 9.1 | 84.5 |
| HALF | 3 | 7 | 3.2 | 6.4 | 90.9 |
| LITTLE | 4 | 10 | 4.6 | 9.1 | 100.0 |
| N/A | . | 92 | 42.4 | MISSING | |
|  | 0 | 15 | 6.9 | MISSING | |
|  | TOTAL | 217 | 100.0 | 100.0 | |

Valid Cases    110      Missing Cases    107

---

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HPRIVATE   Hospital Private

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| ALL | 1 | 10 | 4.6 | 43.5 | 43.5 |
| MOST | 2 | 3 | 1.4 | 13.0 | 56.5 |
| HALF | 3 | 3 | 1.4 | 13.0 | 69.6 |
| LITTLE | 4 | 7 | 3.2 | 30.4 | 100.0 |
| N/A | . | 160 | 73.7 | MISSING | |
|  | 0 | 34 | 15.7 | MISSING | |
|  | TOTAL | 217 | 100.0 | 100.0 | |

Valid Cases        23      Missing Cases    194
------------------------------------------------------------------------
Page  25                           SPSS/PC+                        7/8/88

HOTHER      Hospital Other

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| ALL | 1 | 2 | .9 | 33.3 | 33.3 |
| MOST | 2 | 2 | .9 | 33.3 | 66.7 |
| LITTLE | 4 | 2 | .9 | 33.3 | 100.0 |
| N/A | . | 179 | 82.5 | MISSING | |
| | 0 | 32 | 14.7 | MISSING | |
| | TOTAL | 217 | 100.0 | 100.0 | |

Valid Cases         6      Missing Cases    211
------------------------------------------------------------------------
Page  26                           SPSS/PC+                        7/8/88

HPERPMT     Hospital Pers Pmt

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| ALL | 1 | 10 | 4.6 | 40.0 | 40.0 |
| MOST | 2 | 4 | 1.8 | 16.0 | 56.0 |
| HALF | 3 | 3 | 1.4 | 12.0 | 68.0 |
| LITTLE | 4 | 8 | 3.7 | 32.0 | 100.0 |
| N/A | . | 146 | 67.3 | MISSING | |
| | 0 | 46 | 21.2 | MISSING | |
| | TOTAL | 217 | 100.0 | 100.0 | |

Valid Cases        25      Missing Cases    192
------------------------------------------------------------------------
Page  27                           SPSS/PC+                        7/8/88

HCHAPMT     Hospital CHAMPUS Pmt

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| ALL | 1 | 21 | 9.7 | 51.2 | 51.2 |
| MOST | 2 | 9 | 4.1 | 22.0 | 73.2 |
| HALF | 3 | 6 | 2.8 | 14.6 | 87.8 |
| LITTLE | 4 | 5 | 2.3 | 12.2 | 100.0 |
| N/A | . | 130 | 59.9 | MISSING | |
| | 0 | 46 | 21.2 | MISSING | |
| | TOTAL | 217 | 100.0 | 100.0 | |

Valid Cases    41    Missing Cases    176

----------------------------------------------------------------------

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HMEDPMT    Hospital MEDICARE Pmt

|                |       |           |         | Valid   | Cum     |
| Value Label    | Value | Frequency | Percent | Percent | Percent |
|----------------|-------|-----------|---------|---------|---------|
| MOST           | 2     | 2         | .9      | 66.7    | 66.7    |
| LITTLE         | 4     | 1         | .5      | 33.3    | 100.0   |
| N/A            | .     | 159       | 73.3    | MISSING |         |
|                | 0     | 55        | 25.3    | MISSING |         |
|                |       | --------  | ------- | ------- |         |
|                | TOTAL | 217       | 100.0   | 100.0   |         |

Valid Cases    3    Missing Cases    214

----------------------------------------------------------------------

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HINSPMT    Hospital Pvt Ins Pmt

|                |       |           |         | Valid   | Cum     |
| Value Label    | Value | Frequency | Percent | Percent | Percent |
|----------------|-------|-----------|---------|---------|---------|
| ALL            | 1     | 1         | .5      | 16.7    | 16.7    |
| MOST           | 2     | 2         | .9      | 33.3    | 50.0    |
| HALF           | 3     | 1         | .5      | 16.7    | 66.7    |
| LITTLE         | 4     | 2         | .9      | 33.3    | 100.0   |
| N/A            | .     | 159       | 73.3    | MISSING |         |
|                | 0     | 52        | 24.0    | MISSING |         |
|                |       | --------  | ------- | ------- |         |
|                | TOTAL | 217       | 100.0   | 100.0   |         |

Valid Cases    6    Missing Cases    211

----------------------------------------------------------------------

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INCOMSUM    Income Summary

|                    |       |           |         | Valid   | Cum     |
| Value Label        | Value | Frequency | Percent | Percent | Percent |
|--------------------|-------|-----------|---------|---------|---------|
| < #15,000          | 1     | 56        | 25.8    | 29.8    | 29.8    |
| #15,000-#29,999.99 | 2     | 93        | 42.9    | 49.5    | 79.3    |
| > #30,000          | 3     | 39        | 18.0    | 20.7    | 100.0   |
|                    | 0     | 29        | 13.4    | MISSING |         |
|                    |       | -------   | ------- | ------- |         |
|                    | TOTAL | 217       | 100.0   | 100.0   |         |

APPENDIX P

DESCRIPTIVE STATISTICS AND FREQUENCY DISTRIBUTIONS

FOR THE RETIREE QUESTIONNAIRE

This procedure was completed at  8:03:25
---------------------------------------------------------------------------

Number of Valid Observations (Listwise) =         0.0

| Variable | Mean | Std Dev | Minimum | Maximum | N | Label |
|---|---|---|---|---|---|---|
| AGE | 59.77 | 9.03 | 28 | 83 | 434 | Age of Respondent |
| RANK | 5.82 | 1.91 | 3 | 10 | 437 | Retired Rank |
| ZIPCODE | 32651.62 | 1786.60 | 31058 | 36877 | 439 | Local Address |
| DISTANCE | 1.32 | .79 | 1 | 4 | 439 | Distance to MACH |
| FAMILY | 1.71 | 1.12 | 1 | 8 | 380 | Number of Family Mem |
| DEERS | 1.16 | .44 | 1 | 3 | 426 | DEERS Registration |
| INCOME | 27954.90 | 18634.04 | 4000 | 200000 | 392 | Family Income/Year |
| INCOMSUM | 2.18 | .74 | 1 | 3 | 392 | Income Summary |
| ROVMACH | 1.56 | 1.00 | 1 | 4 | 306 | Ret Off Visit MACH |
| ROVPVTMD | 2.22 | 1.23 | 1 | 4 | 150 | Ret Off Visit Pvt MD |
| ROVOTHER | 2.73 | 1.39 | 1 | 4 | 15 | Ret Off Visit Other |
| ROVPPMT | 1.93 | 1.17 | 1 | 4 | 117 | Ret Off Visit Pers P |
| ROVCPMT | 2.27 | 1.26 | 1 | 4 | 75 | Ret Off Visit CHAMPU |
| ROVMPMT | 2.08 | 1.25 | 1 | 4 | 40 | Ret Off Visit MEDICA |
| ROVIOMT | 1.96 | 1.13 | 1 | 4 | 80 | Ret Off Visit Ins Pm |
| RHMACH | 1.27 | .69 | 1 | 4 | 133 | Ret Hospital MACH |
| RPVTH | 1.47 | .97 | 1 | 4 | 76 | Ret Pvt Hospital |
| ROTHERH | 1.71 | 1.25 | 1 | 4 | 7 | Ret Other Hospital |
| RHPERPMT | 2.53 | 1.38 | 1 | 4 | 30 | Ret Hos Pers Pmt |

---------------------------------------------------------------------------

Number of Valid Observations (Listwise) =         0.0

| Variable | Mean | Std Dev | Minimum | Maximum | N | Label |
|---|---|---|---|---|---|---|
| RHCPMT | 1.92 | 1.26 | 1 | 4 | 51 | Ret Hosp CHAMPUS Pmt |
| RHMPMT | 1.77 | 1.17 | 1 | 4 | 30 | Ret Hosp MEDICARE Pm |
| RHIPMT | 1.44 | .88 | 1 | 4 | 59 | Ret Hosp Ins Pmt |
| DOVMACH | 1.64 | .97 | 1 | 4 | 288 | Dep Off Visit MACH |
| DOVPVTMD | 2.01 | 1.18 | 1 | 4 | 181 | Dep Off Visit Pvt MD |
| DOVOTHER | 2.67 | 1.37 | 1 | 4 | 6 | Dep Off Visit Other |
| DOVPPMT | 1.91 | 1.13 | 1 | 4 | 147 | Dep Off Visit Pers P |
| DOVCPMT | 2.28 | 1.24 | 1 | 4 | 87 | Dep Off Visit CHAMPU |
| DOVMPMT | 1.92 | 1.12 | 1 | 4 | 40 | Dep Off Visit MEDICA |
| DOVIPMT | 1.99 | 1.14 | 1 | 4 | 91 | Dep Off Visit Ins Pm |
| DHMACH | 1.23 | .62 | 1 | 4 | 111 | Dep Hosp MACH |
| DPVTH | 1.43 | .98 | 1 | 4 | 96 | Dep Pvt Hosp |
| DOTHERH | 2.50 | 2.12 | 1 | 4 | 2 | Dep Other Hosp |
| DHPPMT | 2.32 | 1.30 | 1 | 4 | 38 | Dep Hosp Pers Pmt |
| DHCPMT | 1.82 | 1.16 | 1 | 4 | 66 | Dep Hosp CHAMPUS Pmt |
| DHMPMT | 1.50 | .95 | 1 | 4 | 26 | Dep Hosp MEDICARE Pm |
| DHIPMT | 1.49 | .86 | 1 | 4 | 72 | Dep Hosp Ins Pmt |
| INSUR | 2.50 | .96 | 1 | 5 | 347 | Private Health Insur |

---------------------------------------------------------------------------

AGE          Age of Respondent

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| | 28 | 1 | .2 | .2 | .2 |
| | 31 | 1 | .2 | .2 | .5 |
| | 37 | 1 | .2 | .2 | .7 |
| | 38 | 2 | .5 | .5 | 1.2 |
| | 39 | 1 | .2 | .2 | 1.4 |
| | 40 | 2 | .5 | .5 | 1.8 |
| | 41 | 5 | 1.1 | 1.2 | 3.0 |
| | 42 | 2 | .5 | .5 | 3.5 |
| | 43 | 3 | .7 | .7 | 4.1 |
| | 44 | 2 | .5 | .5 | 4.6 |
| | 45 | 7 | 1.6 | 1.6 | 6.2 |
| | 46 | 4 | .9 | .9 | 7.1 |
| | 47 | 6 | 1.4 | 1.4 | 8.5 |
| | 48 | 10 | 2.3 | 2.3 | 10.8 |
| | 49 | 6 | 1.4 | 1.4 | 12.2 |
| | 50 | 6 | 1.4 | 1.4 | 13.6 |
| | 51 | 8 | 1.8 | 1.8 | 15.4 |
| | 52 | 20 | 4.6 | 4.6 | 20.0 |

AGE          Age of Respondent

| | 53 | 16 | 3.6 | 3.7 | 23.7 |
|---|---|---|---|---|---|
| | 54 | 13 | 3.0 | 3.0 | 26.7 |
| | 55 | 18 | 4.1 | 4.1 | 30.9 |
| | 56 | 22 | 5.0 | 5.1 | 35.9 |
| | 57 | 17 | 3.9 | 3.9 | 39.9 |
| | 58 | 17 | 3.9 | 3.9 | 43.8 |
| | 59 | 23 | 5.2 | 5.3 | 49.1 |
| | 60 | 20 | 4.6 | 4.6 | 53.7 |
| | 61 | 20 | 4.6 | 4.6 | 58.3 |
| | 62 | 21 | 4.8 | 4.8 | 63.1 |
| | 63 | 13 | 3.0 | 3.0 | 66.1 |
| | 64 | 13 | 3.0 | 3.0 | 69.1 |
| | 65 | 23 | 5.2 | 5.3 | 74.4 |
| | 66 | 13 | 3.0 | 3.0 | 77.4 |
| | 67 | 15 | 3.4 | 3.5 | 80.9 |
| | 68 | 6 | 1.4 | 1.4 | 82.3 |
| | 69 | 16 | 3.6 | 3.7 | 85.9 |
| | 70 | 10 | 2.3 | 2.3 | 88.2 |
| | 71 | 10 | 2.3 | 2.3 | 90.6 |
| | 72 | 3 | .7 | .7 | 91.2 |
| | 73 | 6 | 1.4 | 1.4 | 92.6 |

|  | 74 | 7 | 1.6 | 1.6 | 94.2 |
|---|---|---|---|---|---|

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AGE        Age of Respondent

|  | 75 | 7 | 1.6 | 1.6 | 95.9 |
|---|---|---|---|---|---|
|  | 76 | 5 | 1.1 | 1.2 | 97.0 |
|  | 77 | 4 | .9 | .9 | 97.9 |
|  | 78 | 4 | .9 | .9 | 98.8 |
|  | 80 | 1 | .2 | .2 | 99.1 |
|  | 81 | 2 | .5 | .5 | 99.5 |
|  | 83 | 2 | .5 | .5 | 100.0 |
|  | 0 | 5 | 1.1 | MISSING |  |
|  | TOTAL | 439 | 100.0 | 100.0 |  |

Valid Cases     434      Missing Cases     5

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RANK       Retired Rank

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| E4 | 3 | 1 | .2 | .2 | .2 |
| E5-E6 | 4 | 91 | 20.7 | 20.8 | 21.1 |
| E7-E9 | 5 | 217 | 49.4 | 49.7 | 70.7 |
| W1-O2 | 6 | 14 | 3.2 | 3.2 | 73.9 |
| O3 | 7 | 6 | 1.4 | 1.4 | 75.3 |
| O4-O5 | 8 | 50 | 11.4 | 11.4 | 86.7 |
| O6-O10 | 9 | 16 | 3.6 | 3.7 | 90.4 |
| Deceased | 10 | 42 | 9.6 | 9.6 | 100.0 |
|  | 0 | 2 | .5 | MISSING |  |
|  | TOTAL | 439 | 100.0 | 100.0 |  |

Valid Cases        437      Missing Cases        2

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ZIPCODE     Local Address

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| | 31058 | 1 | .2 | .2 | .2 |
| | 31754 | 1 | .2 | .2 | .5 |
| | 31804 | 6 | 1.4 | 1.4 | 1.8 |
| | 31805 | 4 | .9 | .9 | 2.7 |
| | 31807 | 1 | .2 | .2 | 3.0 |
| | 31808 | 4 | .9 | .9 | 3.9 |
| | 31811 | 3 | .7 | .7 | 4.6 |
| | 31815 | 1 | .2 | .2 | 4.8 |
| | 31820 | 5 | 1.1 | 1.1 | 5.9 |
| | 31823 | 2 | .5 | .5 | 6.4 |
| | 31825 | 1 | .2 | .2 | 6.6 |
| | 31826 | 1 | .2 | .2 | 6.8 |
| | 31829 | 2 | .5 | .5 | 7.3 |
| | 31831 | 3 | .7 | .7 | 8.0 |
| | 31833 | 1 | .2 | .2 | 8.2 |
| | 31836 | 1 | .2 | .2 | 8.4 |
| | 31901 | 1 | .2 | .2 | 8.7 |
| | 31903 | 85 | 19.4 | 19.4 | 28.0 |

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ZIPCODE     Local Address

| Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|
| 31904 | 39 | 8.9 | 8.9 | 36.9 |
| 31906 | 42 | 9.6 | 9.6 | 46.5 |
| 31907 | 132 | 30.1 | 30.1 | 76.5 |
| 31909 | 36 | 8.2 | 8.2 | 84.7 |
| 36801 | 7 | 1.6 | 1.6 | 86.3 |
| 36803 | 1 | .2 | .2 | 86.6 |
| 36830 | 8 | 1.8 | 1.8 | 88.4 |
| 36852 | 1 | .2 | .2 | 88.6 |
| 36854 | 3 | .7 | .7 | 89.3 |
| 36856 | 2 | .5 | .5 | 89.7 |
| 36858 | 1 | .2 | .2 | 90.0 |
| 36863 | 2 | .5 | .5 | 90.4 |
| 36867 | 26 | 5.9 | 5.9 | 96.4 |
| 36868 | 2 | .5 | .5 | 96.8 |
| 36872 | 1 | .2 | .2 | 97.0 |
| 36874 | 3 | .7 | .7 | 97.7 |
| 36875 | 6 | 1.4 | 1.4 | 99.1 |
| 36877 | 4 | .9 | .9 | 100.0 |
| TOTAL | 439 | 100.0 | 100.0 | |

Valid Cases    439    Missing Cases    0
--------------------------------------------------------------------
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DISTANCE    Distance to MACH

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| 0 to 10 Miles | 1 | 364 | 82.9 | 82.9 | 82.9 |
| 11 to 20 Miles | 2 | 33 | 7.5 | 7.5 | 90.4 |
| 21 to 30 Miles | 3 | 18 | 4.1 | 4.1 | 94.5 |
| 31 to 40 Miles | 4 | 24 | 5.5 | 5.5 | 100.0 |
| | TOTAL | 439 | 100.0 | 100.0 | |

Valid Cases    439    Missing Cases    0
--------------------------------------------------------------------
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FAMILY     Number of Family Members

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| One | 1 | 225 | 51.3 | 59.2 | 59.2 |
| Two | 2 | 89 | 20.3 | 23.4 | 82.6 |
| Three | 3 | 36 | 8.2 | 9.5 | 92.1 |
| Four | 4 | 17 | 3.9 | 4.5 | 96.6 |
| Five | 5 | 9 | 2.1 | 2.4 | 98.9 |
| Six | 6 | 2 | .5 | .5 | 99.5 |
| Seven | 7 | 1 | .2 | .3 | 99.7 |
| Eight | 8 | 1 | .2 | .3 | 100.0 |
| None | . | 50 | 11.4 | MISSING | |
| | 0 | 9 | 2.1 | MISSING | |
| | TOTAL | 439 | 100.0 | 100.0 | |

Valid Cases    380    Missing Cases    59
--------------------------------------------------------------------
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DEERS      DEERS Registration

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| Yes | 1 | 370 | 84.3 | 86.9 | 86.9 |
| No | 2 | 43 | 9.8 | 10.1 | 96.9 |
| Don't Know | 3 | 13 | 3.0 | 3.1 | 100.0 |
| | 0 | 13 | 3.0 | MISSING | |
| | TOTAL | 439 | 100.0 | 100.0 | |

Valid Cases     426     Missing Cases     13
-----------------------------------------------------------------
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INCOME     Family Income/Year

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
|  | 4000 | 1 | .2 | .3 | .3 |
|  | 4320 | 1 | .2 | .3 | .5 |
|  | 5000 | 5 | 1.1 | 1.3 | 1.8 |
|  | 6000 | 3 | .7 | .8 | 2.6 |
|  | 7000 | 3 | .7 | .8 | 3.3 |
|  | 8000 | 5 | 1.1 | 1.3 | 4.6 |
|  | 9000 | 6 | 1.4 | 1.5 | 6.1 |
|  | 10000 | 13 | 3.0 | 3.3 | 9.4 |
|  | 11000 | 5 | 1.1 | 1.3 | 10.7 |
|  | 12000 | 11 | 2.5 | 2.8 | 13.5 |
|  | 13000 | 7 | 1.6 | 1.8 | 15.3 |
|  | 14000 | 17 | 3.9 | 4.3 | 19.6 |
|  | 15000 | 15 | 3.4 | 3.8 | 23.5 |
|  | 16000 | 6 | 1.4 | 1.5 | 25.0 |
|  | 17000 | 14 | 3.2 | 3.6 | 28.6 |
|  | 18000 | 16 | 3.6 | 4.1 | 32.7 |
|  | 19000 | 9 | 2.1 | 2.3 | 34.9 |
|  | 20000 | 21 | 4.8 | 5.4 | 40.3 |

-----------------------------------------------------------------
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INCOME     Family Income/Year

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
|  | 21000 | 10 | 2.3 | 2.6 | 42.9 |
|  | 22000 | 11 | 2.5 | 2.8 | 45.7 |
|  | 23000 | 5 | 1.1 | 1.3 | 46.9 |
|  | 24000 | 16 | 3.6 | 4.1 | 51.0 |
|  | 25000 | 16 | 3.6 | 4.1 | 55.1 |
|  | 26000 | 11 | 2.5 | 2.8 | 57.9 |
|  | 27000 | 6 | 1.4 | 1.5 | 59.4 |
|  | 28000 | 5 | 1.1 | 1.3 | 60.7 |
|  | 29000 | 6 | 1.4 | 1.5 | 62.2 |
|  | 30000 | 28 | 6.4 | 7.1 | 69.4 |
|  | 31000 | 2 | .5 | .5 | 69.9 |
|  | 32000 | 4 | .9 | 1.0 | 70.9 |
|  | 33000 | 5 | 1.1 | 1.3 | 72.2 |
|  | 34000 | 2 | .5 | .5 | 72.7 |
|  | 35000 | 15 | 3.4 | 3.8 | 76.5 |
|  | 36000 | 4 | .9 | 1.0 | 77.6 |
|  | 37000 | 3 | .7 | .8 | 78.3 |
|  | 38000 | 5 | 1.1 | 1.3 | 79.6 |
|  | 39000 | 4 | .9 | 1.0 | 80.6 |
|  | 40000 | 16 | 3.6 | 4.1 | 84.7 |
|  | 41000 | 1 | .2 | .3 | 84.9 |

|  |  |  |  |  |
|---|---|---|---|---|
| 42000 | 2 | .5 | .5 | 85.5 |

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INCOME      Family Income/Year

| Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|
| 43000 | 1 | .2 | .3 | 85.7 |
| 44000 | 1 | .2 | .3 | 86.0 |
| 45000 | 5 | 1.1 | 1.3 | 87.2 |
| 46000 | 1 | .2 | .3 | 87.5 |
| 47000 | 2 | .5 | .5 | 88.0 |
| 48000 | 4 | .9 | 1.0 | 89.0 |
| 49000 | 2 | .5 | .5 | 89.5 |
| 50000 | 14 | 3.2 | 3.6 | 93.1 |
| 51000 | 1 | .2 | .3 | 93.4 |
| 53000 | 1 | .2 | .3 | 93.6 |
| 54000 | 1 | .2 | .3 | 93.9 |
| 55000 | 1 | .2 | .3 | 94.1 |
| 60000 | 10 | 2.3 | 2.6 | 96.7 |
| 63000 | 1 | .2 | .3 | 96.9 |
| 65000 | 2 | .5 | .5 | 97.4 |
| 70000 | 2 | .5 | .5 | 98.0 |
| 75000 | 1 | .2 | .3 | 98.2 |
| 80000 | 2 | .5 | .5 | 98.7 |
| 86000 | 2 | .5 | .5 | 99.2 |
| 96000 | 1 | .2 | .3 | 99.5 |
| 150000 | 1 | .2 | .3 | 99.7 |
| 200000 | 1 | .2 | .3 | 100.0 |

--------------------------------------------------------------

INCOME      Family Income/Year

|  |  |  |  |
|---|---|---|---|
| 0 | 47 | 10.7 | MISSING |
|  | ------- | ------- | ------- |
| TOTAL | 439 | 100.0 | 100.0 |

Valid Cases      392      Missing Cases      47

--------------------------------------------------------------

INCOMSUM    Income Summary

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| < #15,000.00 | 1 | 78 | 17.8 | 19.9 | 19.9 |
| #15,000.00-#29,999.9 | 2 | 167 | 38.0 | 42.6 | 62.5 |
| > #30,000 | 3 | 147 | 33.5 | 37.5 | 100.0 |
|  | 0 | 47 | 10.7 | MISSING |  |
|  |  | ------- | ------- | ------- |  |
| TOTAL |  | 439 | 100.0 | 100.0 |  |

Valid Cases     392     Missing Cases     47
--------------------------------------------------------------------
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ROVMACH    Ret Off Visit MACH

|                |       |           |         | Valid   | Cum     |
| Value Label    | Value | Frequency | Percent | Percent | Percent |
|----------------|-------|-----------|---------|---------|---------|
| ALL            | 1     | 215       | 49.0    | 70.3    | 70.3    |
| MOST           | 2     | 43        | 9.8     | 14.1    | 84.3    |
| HALF           | 3     | 15        | 3.4     | 4.9     | 89.2    |
| LITTLE         | 4     | 33        | 7.5     | 10.8    | 100.0   |
| N/A            | .     | 79        | 18.0    | MISSING |         |
|                | 0     | 54        | 12.3    | MISSING |         |
|                |       | -------   | ------- | ------- |         |
|                | TOTAL | 439       | 100.0   | 100.0   |         |

Valid Cases     306     Missing Cases     133
--------------------------------------------------------------------
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ROVPVTMD   Ret Off Visit Pvt MD

|                |       |           |         | Valid   | Cum     |
| Value Label    | Value | Frequency | Percent | Percent | Percent |
|----------------|-------|-----------|---------|---------|---------|
| ALL            | 1     | 61        | 13.9    | 40.7    | 40.7    |
| MOST           | 2     | 34        | 7.7     | 22.7    | 63.3    |
| HALF           | 3     | 16        | 3.6     | 10.7    | 74.0    |
| LITTLE         | 4     | 39        | 8.9     | 26.0    | 100.0   |
| N/A            | .     | 223       | 50.8    | MISSING |         |
|                | 0     | 66        | 15.0    | MISSING |         |
|                |       | -------   | ------- | ------- |         |
|                | TOTAL | 439       | 100.0   | 100.0   |         |

Valid Cases     150     Missing Cases     289
--------------------------------------------------------------------
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ROVOTHER   Ret Off Visit Other

|                |       |           |         | Valid   | Cum     |
| Value Label    | Value | Frequency | Percent | Percent | Percent |
|----------------|-------|-----------|---------|---------|---------|
| ALL            | 1     | 5         | 1.1     | 33.3    | 33.3    |
| MOST           | 2     | 1         | .2      | 6.7     | 40.0    |
| HALF           | 3     | 2         | .5      | 13.3    | 53.3    |
| LITTLE         | 4     | 7         | 1.6     | 46.7    | 100.0   |
| N/A            | .     | 316       | 72.0    | MISSING |         |
|                | 0     | 108       | 24.6    | MISSING |         |
|                |       | -------   | ------- | ------- |         |
|                | TOTAL | 439       | 100.0   | 100.0   |         |

Valid Cases    15    Missing Cases    424

--------------------------------------------------------------------

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ROVPPMT    Ret Off Visit Pers Pmt

|                |       |           |         | Valid   | Cum     |
| Value Label    | Value | Frequency | Percent | Percent | Percent |
|----------------|-------|-----------|---------|---------|---------|
| ALL            | 1     | 63        | 14.4    | 53.8    | 53.8    |
| MOST           | 2     | 20        | 4.6     | 17.1    | 70.9    |
| HALF           | 3     | 13        | 3.0     | 11.1    | 82.1    |
| LITTLE         | 4     | 21        | 4.8     | 17.9    | 100.0   |
| N/A            | .     | 172       | 39.2    | MISSING |         |
|                | 0     | 150       | 34.2    | MISSING |         |
|                | TOTAL | 439       | 100.0   | 100.0   |         |

Valid Cases    117    Missing Cases    322

--------------------------------------------------------------------

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ROVCPMT    Ret Off Visit CHAMPUS Pmt

|                |       |           |         | Valid   | Cum     |
| Value Label    | Value | Frequency | Percent | Percent | Percent |
|----------------|-------|-----------|---------|---------|---------|
| ALL            | 1     | 30        | 6.8     | 40.0    | 40.0    |
| MOST           | 2     | 16        | 3.6     | 21.3    | 61.3    |
| HALF           | 3     | 8         | 1.8     | 10.7    | 72.0    |
| LITTLE         | 4     | 21        | 4.8     | 28.0    | 100.0   |
| N/A            | .     | 209       | 47.6    | MISSING |         |
|                | 0     | 155       | 35.3    | MISSING |         |
|                | TOTAL | 439       | 100.0   | 100.0   |         |

Valid Cases    75    Missing Cases    364

--------------------------------------------------------------------

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ROVMPMT    Ret Off Visit MEDICARE Pmt

|                |       |           |         | Valid   | Cum     |
| Value Label    | Value | Frequency | Percent | Percent | Percent |
|----------------|-------|-----------|---------|---------|---------|
| ALL            | 1     | 20        | 4.6     | 50.0    | 50.0    |
| MOST           | 2     | 6         | 1.4     | 15.0    | 65.0    |
| HALF           | 3     | 5         | 1.1     | 12.5    | 77.5    |
| LITTLE         | 4     | 9         | 2.1     | 22.5    | 100.0   |
| N/A            | .     | 237       | 54.0    | MISSING |         |
|                | 0     | 162       | 36.9    | MISSING |         |
|                | TOTAL | 439       | 100.0   | 100.0   |         |

Valid Cases      40      Missing Cases      399
--------------------------------------------------------------------
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ROVIOMT    Ret Off Visit Ins Pmt

|                |       |           |         | Valid   | Cum     |
| Value Label    | Value | Frequency | Percent | Percent | Percent |
|----------------|-------|-----------|---------|---------|---------|
| ALL            | 1     | 39        | 8.9     | 48.8    | 48.8    |
| MOST           | 2     | 18        | 4.1     | 22.5    | 71.3    |
| HALF           | 3     | 10        | 2.3     | 12.5    | 83.8    |
| LITTLE         | 4     | 13        | 3.0     | 16.3    | 100.0   |
| N/A            | .     | 219       | 49.9    | MISSING |         |
|                | 0     | 140       | 31.9    | MISSING |         |
|                |       | -------   | ------- | ------- |         |
|                | TOTAL | 439       | 100.0   | 100.0   |         |

Valid Cases      80      Missing Cases      359
--------------------------------------------------------------------
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RHMACH     Ret Hospital MACH

|                |       |           |         | Valid   | Cum     |
| Value Label    | Value | Frequency | Percent | Percent | Percent |
|----------------|-------|-----------|---------|---------|---------|
| ALL            | 1     | 111       | 25.3    | 83.5    | 83.5    |
| MOST           | 2     | 12        | 2.7     | 9.0     | 92.5    |
| HALF           | 3     | 6         | 1.4     | 4.5     | 97.0    |
| LITTLE         | 4     | 4         | .9      | 3.0     | 100.0   |
| N/A            | .     | 219       | 49.9    | MISSING |         |
|                | 0     | 87        | 19.8    | MISSING |         |
|                |       | -------   | ------- | ------- |         |
|                | TOTAL | 439       | 100.0   | 100.0   |         |

Valid Cases      133     Missing Cases      306
--------------------------------------------------------------------
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RPVTH      Ret Pvt Hospital

|                |       |           |         | Valid   | Cum     |
| Value Label    | Value | Frequency | Percent | Percent | Percent |
|----------------|-------|-----------|---------|---------|---------|
| ALL            | 1     | 59        | 13.4    | 77.6    | 77.6    |
| MOST           | 2     | 5         | 1.1     | 6.6     | 84.2    |
| HALF           | 3     | 5         | 1.1     | 6.6     | 90.8    |
| LITTLE         | 4     | 7         | 1.6     | 9.2     | 100.0   |
| N/A            | .     | 259       | 59.0    | MISSING |         |
|                | 0     | 104       | 23.7    | MISSING |         |
|                |       | -------   | ------- | ------- |         |
|                | TOTAL | 439       | 100.0   | 100.0   |         |

Valid Cases        76      Missing Cases      363
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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ROTHERH      Ret Other Hospital

|                |       |           |         | Valid   | Cum     |
| Value Label    | Value | Frequency | Percent | Percent | Percent |
| -------------- | ----- | --------- | ------- | ------- | ------- |
| ALL            | 1     | 5         | 1.1     | 71.4    | 71.4    |
| HALF           | 3     | 1         | .2      | 14.3    | 85.7    |
| LITTLE         | 4     | 1         | .2      | 14.3    | 100.0   |
| N/A            | .     | 318       | 72.4    | MISSING |         |
|                | 0     | 114       | 26.0    | MISSING |         |
|                |       | -------   | ------- | ------- |         |
|                | TOTAL | 439       | 100.0   | 100.0   |         |

Valid Cases         7     Missing Cases      432
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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RHPERPMT     Ret Hos Pers Pmt

|                |       |           |         | Valid   | Cum     |
| Value Label    | Value | Frequency | Percent | Percent | Percent |
| -------------- | ----- | --------- | ------- | ------- | ------- |
| ALL            | 1     | 11        | 2.5     | 36.7    | 36.7    |
| MOST           | 2     | 5         | 1.1     | 16.7    | 53.3    |
| HALF           | 3     | 1         | .2      | 3.3     | 56.7    |
| LITTLE         | 4     | 13        | 3.0     | 43.3    | 100.0   |
| N/A            | .     | 265       | 60.4    | MISSING |         |
|                | 0     | 144       | 32.8    | MISSING |         |
|                |       | -------   | ------- | ------- |         |
|                | TOTAL | 439       | 100.0   | 100.0   |         |

Valid Cases        30     Missing Cases      409
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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RHCPMT       Ret Hosp CHAMPUS Pmt

|                |       |           |         | Valid   | Cum     |
| Value Label    | Value | Frequency | Percent | Percent | Percent |
| -------------- | ----- | --------- | ------- | ------- | ------- |
| ALL            | 1     | 30        | 6.8     | 58.8    | 58.8    |
| MOST           | 2     | 7         | 1.6     | 13.7    | 72.5    |
| HALF           | 3     | 2         | .5      | 3.9     | 76.5    |
| LITTLE         | 4     | 12        | 2.7     | 23.5    | 100.0   |
| N/A            | .     | 233       | 53.1    | MISSING |         |
|                | 0     | 155       | 35.3    | MISSING |         |
|                |       | -------   | ------- | ------- |         |
|                | TOTAL | 439       | 100.0   | 100.0   |         |

Valid Cases     51     Missing Cases     388
--------------------------------------------------------------

RHMPMT     Ret Hosp MEDICARE Pmt

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| ALL | 1 | 19 | 4.3 | 63.3 | 63.3 |
| MOST | 2 | 4 | .9 | 13.3 | 76.7 |
| HALF | 3 | 2 | .5 | 6.7 | 83.3 |
| LITTLE | 4 | 5 | 1.1 | 16.7 | 100.0 |
| N/A | . | 253 | 57.6 | MISSING | |
| | 0 | 156 | 35.5 | MISSING | |
| | TOTAL | 439 | 100.0 | 100.0 | |

Valid Cases     30     Missing Cases     409
--------------------------------------------------------------

RHIPMT     Ret Hosp Ins Pmt

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| ALL | 1 | 44 | 10.0 | 74.6 | 74.6 |
| MOST | 2 | 8 | 1.8 | 13.6 | 88.1 |
| HALF | 3 | 3 | .7 | 5.1 | 93.2 |
| LITTLE | 4 | 4 | .9 | 6.8 | 100.0 |
| N/A | . | 234 | 53.3 | MISSING | |
| | 0 | 146 | 33.3 | MISSING | |
| | TOTAL | 439 | 100.0 | 100.0 | |

Valid Cases     59     Missing Cases     380
--------------------------------------------------------------

DOVMACH     Dep Off Visit MACH

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| ALL | 1 | 178 | 40.5 | 61.8 | 61.8 |
| MOST | 2 | 63 | 14.4 | 21.9 | 83.7 |
| HALF | 3 | 20 | 4.6 | 6.9 | 90.6 |
| LITTLE | 4 | 27 | 6.2 | 9.4 | 100.0 |
| N/A | . | 107 | 24.4 | MISSING | |
| | 0 | 44 | 10.0 | MISSING | |
| | TOTAL | 439 | 100.0 | 100.0 | |

Valid Cases     288     Missing Cases    151
----------------------------------------------------------------
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DOVPVTMD   Dep Off Visit Pvt MD

|                |       |           |         | Valid   | Cum     |
| Value Label    | Value | Frequency | Percent | Percent | Percent |
|----------------|-------|-----------|---------|---------|---------|
| ALL            | 1     | 91        | 20.7    | 50.3    | 50.3    |
| MOST           | 2     | 32        | 7.3     | 17.7    | 68.0    |
| HALF           | 3     | 24        | 5.5     | 13.3    | 81.2    |
| LITTLE         | 4     | 34        | 7.7     | 18.8    | 100.0   |
| N/A            | .     | 190       | 43.3    | MISSING |         |
|                | 0     | 68        | 15.5    | MISSING |         |
|                |       | -------   | ------- | ------- |         |
|                | TOTAL | 439       | 100.0   | 100.0   |         |

Valid Cases     181     Missing Cases    258
----------------------------------------------------------------
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DOVOTHER   Dep Off Visit Other

|                |       |           |         | Valid   | Cum     |
| Value Label    | Value | Frequency | Percent | Percent | Percent |
|----------------|-------|-----------|---------|---------|---------|
| ALL            | 1     | 2         | .5      | 33.3    | 33.3    |
| HALF           | 3     | 2         | .5      | 33.3    | 66.7    |
| LITTLE         | 4     | 2         | .5      | 33.3    | 100.0   |
| N/A            | .     | 326       | 74.3    | MISSING |         |
|                | 0     | 107       | 24.4    | MISSING |         |
|                |       | -------   | ------- | ------- |         |
|                | TOTAL | 439       | 100.0   | 100.0   |         |

Valid Cases       6     Missing Cases    433
----------------------------------------------------------------
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DOVPPMT   Dep Off Visit Pers Pmt

|                |       |           |         | Valid   | Cum     |
| Value Label    | Value | Frequency | Percent | Percent | Percent |
|----------------|-------|-----------|---------|---------|---------|
| ALL            | 1     | 79        | 18.0    | 53.7    | 53.7    |
| MOST           | 2     | 24        | 5.5     | 16.3    | 70.1    |
| HALF           | 3     | 22        | 5.0     | 15.0    | 85.0    |
| LITTLE         | 4     | 22        | 5.0     | 15.0    | 100.0   |
| N/A            | .     | 179       | 40.8    | MISSING |         |
|                | 0     | 113       | 25.7    | MISSING |         |
|                |       | -------   | ------- | ------- |         |
|                | TOTAL | 439       | 100.0   | 100.0   |         |

Valid Cases    147    Missing Cases    292

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DOVCPMT    Dep Off Visit CHAMPUS Pmt

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| ALL | 1 | 35 | 8.0 | 40.2 | 40.2 |
| MOST | 2 | 15 | 3.4 | 17.2 | 57.5 |
| HALF | 3 | 15 | 3.4 | 17.2 | 74.7 |
| LITTLE | 4 | 22 | 5.0 | 25.3 | 100.0 |
| N/A | . | 219 | 49.9 | MISSING | |
| | 0 | 133 | 30.3 | MISSING | |
| | TOTAL | 439 | 100.0 | 100.0 | |

Valid Cases    87    Missing Cases    352

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DOVMPMT    Dep Off Visit MEDICARE Pmt

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| ALL | 1 | 20 | 4.6 | 50.0 | 50.0 |
| MOST | 2 | 9 | 2.1 | 22.5 | 72.5 |
| HALF | 3 | 5 | 1.1 | 12.5 | 85.0 |
| LITTLE | 4 | 6 | 1.4 | 15.0 | 100.0 |
| N/A | . | 266 | 60.6 | MISSING | |
| | 0 | 133 | 30.3 | MISSING | |
| | TOTAL | 439 | 100.0 | 100.0 | |

Valid Cases    40    Missing Cases    399

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DOVIPMT    Dep Off Visit Ins Pmt

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| ALL | 1 | 44 | 10.0 | 48.4 | 48.4 |
| MOST | 2 | 19 | 4.3 | 20.9 | 69.2 |
| HALF | 3 | 13 | 3.0 | 14.3 | 83.5 |
| LITTLE | 4 | 15 | 3.4 | 16.5 | 100.0 |
| N/A | . | 231 | 52.6 | MISSING | |
| | 0 | 117 | 26.7 | MISSING | |
| | TOTAL | 439 | 100.0 | 100.0 | |

Valid Cases    91    Missing Cases    348

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DHMACH     Dep Hosp MACH

|  |  |  |  | Valid | Cum |
| Value Label | Value | Frequency | Percent | Percent | Percent |
|-------------|-------|-----------|---------|---------|---------|
| ALL | 1 | 93 | 21.2 | 83.8 | 83.8 |
| MOST | 2 | 13 | 3.0 | 11.7 | 95.5 |
| HALF | 3 | 2 | .5 | 1.8 | 97.3 |
| LITTLE | 4 | 3 | .7 | 2.7 | 100.0 |
| N/A | . | 257 | 58.5 | MISSING | |
|  | 0 | 71 | 16.2 | MISSING | |
|  | TOTAL | 439 | 100.0 | 100.0 | |

Valid Cases    111    Missing Cases    328

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DPVTH     Dep Pvt Hosp

|  |  |  |  | Valid | Cum |
| Value Label | Value | Frequency | Percent | Percent | Percent |
|-------------|-------|-----------|---------|---------|---------|
| ALL | 1 | 78 | 17.8 | 81.3 | 81.3 |
| MOST | 2 | 6 | 1.4 | 6.3 | 87.5 |
| HALF | 3 | 1 | .2 | 1.0 | 88.5 |
| LITTLE | 4 | 11 | 2.5 | 11.5 | 100.0 |
| N/A | . | 255 | 58.1 | MISSING | |
|  | 0 | 88 | 20.0 | MISSING | |
|  | TOTAL | 439 | 100.0 | 100.0 | |

Valid Cases    96    Missing Cases    343

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DOTHERH    Dep Other Hosp

|  |  |  |  | Valid | Cum |
| Value Label | Value | Frequency | Percent | Percent | Percent |
|-------------|-------|-----------|---------|---------|---------|
| ALL | 1 | 1 | .2 | 50.0 | 50.0 |
| LITTLE | 4 | 1 | .2 | 50.0 | 100.0 |
| N/A | . | 338 | 77.0 | MISSING | |
|  | 0 | 99 | 22.6 | MISSING | |
|  | TOTAL | 439 | 100.0 | 100.0 | |

Valid Cases        2      Missing Cases    437
--------------------------------------------------------------------
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DHPPMT      Dep Hosp Pers Pmt

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| ALL | 1 | 16 | 3.6 | 42.1 | 42.1 |
| MOST | 2 | 5 | 1.1 | 13.2 | 55.3 |
| HALF | 3 | 6 | 1.4 | 15.8 | 71.1 |
| LITTLE | 4 | 11 | 2.5 | 28.9 | 100.0 |
| N/A | . | 276 | 62.9 | MISSING | |
| | 0 | 125 | 28.5 | MISSING | |
| | TOTAL | 439 | 100.0 | 100.0 | |

Valid Cases       38      Missing Cases    401
--------------------------------------------------------------------
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DHCPMT      Dep Hosp CHAMPUS Pmt

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| ALL | 1 | 39 | 8.9 | 59.1 | 59.1 |
| MOST | 2 | 12 | 2.7 | 18.2 | 77.3 |
| HALF | 3 | 3 | .7 | 4.5 | 81.8 |
| LITTLE | 4 | 12 | 2.7 | 18.2 | 100.0 |
| N/A | . | 250 | 56.9 | MISSING | |
| | 0 | 123 | 28.0 | MISSING | |
| | TOTAL | 439 | 100.0 | 100.0 | |

Valid Cases       66      Missing Cases    373
--------------------------------------------------------------------
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DHMPMT      Dep Hosp MEDICARE Pmt

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| ALL | 1 | 19 | 4.3 | 73.1 | 73.1 |
| MOST | 2 | 3 | .7 | 11.5 | 84.6 |
| HALF | 3 | 2 | .5 | 7.7 | 92.3 |
| LITTLE | 4 | 2 | .5 | 7.7 | 100.0 |
| N/A | . | 271 | 61.7 | MISSING | |
| | 0 | 142 | 32.3 | MISSING | |
| | TOTAL | 439 | 100.0 | 100.0 | |

Valid Cases        26      Missing Cases    413

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DHIPMT      Dep Hosp Ins Pmt

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| ALL | 1 | 50 | 11.4 | 69.4 | 69.4 |
| MOST | 2 | 13 | 3.0 | 18.1 | 87.5 |
| HALF | 3 | 5 | 1.1 | 6.9 | 94.4 |
| LITTLE | 4 | 4 | .9 | 5.6 | 100.0 |
| N/A | . | 251 | 57.2 | MISSING | |
| | 0 | 116 | 26.4 | MISSING | |
| | TOTAL | 439 | 100.0 | 100.0 | |

Valid Cases        72      Missing Cases    367

-----------------------------------------------------------------------------

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INSUR       Private Health Insurance

| Value Label | Value | Frequency | Percent | Valid Percent | Cum Percent |
|---|---|---|---|---|---|
| None | 1 | 44 | 10.0 | 12.7 | 12.7 |
| Supplemental Only | 2 | 155 | 35.3 | 44.7 | 57.3 |
| Comprehensive Only | 3 | 79 | 18.0 | 22.8 | 80.1 |
| Suppl + Comp | 4 | 67 | 15.3 | 19.3 | 99.4 |
| Unknown Type | 5 | 2 | .5 | .6 | 100.0 |
| | 0 | 92 | 21.0 | MISSING | |
| | TOTAL | 439 | 100.0 | 100.0 | |

Valid Cases        347     Missing Cases     92

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APPENDIX Q

CROSSTABULATION AND CHI-SQUARE DATA

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Crosstabulation:        RHMACH      Ret Hospital MACH
                   By DISTANCE   Distance to MACH

| DISTANCE-> | Count | 0 to 10 Miles 1 | 11 to 20 Miles 2 | 21 to 30 Miles 3 | 31 to 40 Miles 4 | Row Total |
|---|---|---|---|---|---|---|
| RHMACH | | | | | | |
| ALL | 1 | 96 | 8 | 3 | 4 | 111 / 83.5 |
| MOST | 2 | 11 | | | 1 | | 12 / 9.0 |
| HALF | 3 | 5 | | | | 1 | 6 / 4.5 |
| LITTLE | 4 | 2 | | | 2 | | 4 / 3.0 |
| Column Total | | 114 / 85.7 | 8 / 6.0 | 6 / 4.5 | 5 / 3.8 | 133 / 100.0 |

----------------------------------------------------------------------

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| Chi-Square | D.F. | Significance | Min E.F. | Cells with E.F.< 5 |
|---|---|---|---|---|
| 25.32087 | 9 | .0026 | .150 | 11 OF  16 ( 68.8%) |

| Statistic | Value | Significance |
|---|---|---|
| Gamma | .22487 | |

Number of Missing Observations =    306

---

Crosstabulation:      RPVTH      Ret Pvt Hospital
                  By DISTANCE   Distance to MACH

| Count | 0 to 10 Miles | 11 to 20 Miles | 21 to 30 Miles | 31 to 40 Miles | Row Total |
|---|---|---|---|---|---|
| DISTANCE-> | 1 | 2 | 3 | 4 | |
| RPVTH | | | | | |
| 1 ALL | 47 | 5 | 1 | 6 | 59  77.6 |
| 2 MOST | 2 | | 2 | 1 | 5  6.6 |
| 3 HALF | 4 | | | 1 | 5  6.6 |
| 4 LITTLE | 4 | | 1 | 2 | 7  9.2 |
| Column Total | 57  75.0 | 5  6.6 | 4  5.3 | 10  13.2 | 76  100.0 |

---

| Chi-Square | D.F. | Significance | Min E.F. | Cells with E.F.< 5 |
|---|---|---|---|---|
| 18.99900 | 9 | .0252 | .263 | 13 OF  16 ( 81.3%) |

| Statistic | Value | Significance |
|---|---|---|
| Gamma | .40214 | |

---

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Crosstabulation:     ROVPVTMD   Ret Off Visit Pvt MD
                 By INCOMSUM   Income Summary

|  | Count | < $15,000.00 | $15,000.00-$29,9 | > $30,000 | Row |
| INCOMSUM-> | | 1 | 2 | 3 | Total |
| ROVPVTMD | | | | | |
| ALL | 1 | 1 | 11 | 38 | 50 37.0 |
| MOST | 2 | 7 | 10 | 15 | 32 23.7 |
| HALF | 3 | 3 | 5 | 6 | 14 10.4 |
| LITTLE | 4 | 4 | 19 | 16 | 39 28.9 |
| Column Total | | 15 11.1 | 45 33.3 | 75 55.6 | 135 100.0 |

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| Chi-Square | D.F. | Significance | Min E.F. | Cells with E.F.< 5 |
| --- | --- | --- | --- | --- |
| 19.28485 | 6 | .0037 | 1.556 | 4 OF 12 ( 33.3%) |

| Statistic | Value | Significance |
| --- | --- | --- |
| Gamma | -.37822 | |

Number of Missing Observations =    304

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Crosstabulation:      RPVTH      Ret Pvt Hospital
                   By INCOMSUM   Income Summary

```
              Count  :< $15,00:$15,000.:> $30,00:
INCOMSUM->           :0.00     :00-$29,9:0       :  Row
                     :      1  :      2 :      3 :  Total
RPVTH        --------+--------+--------+--------+
             1  :      2  :      7 :     39 :    48
   ALL          :         :        :        :    73.8
                +--------+--------+--------+
             2  :      2  :      1 :      2 :    5
   MOST         :         :        :        :    7.7
                +--------+--------+--------+
             3  :      1  :      3 :      1 :    5
   HALF         :         :        :        :    7.7
                +--------+--------+--------+
             4  :      2  :      3 :      2 :    7
   LITTLE       :         :        :        :    10.8
                +--------+--------+--------+
           Column        7       14       44      65
           Total      10.8     21.5     67.7   100.0
```

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Chi-Square	D.F.	Significance	Min E.F.	Cells with E.F.< 5
19.49284	6	.0034	.538	9 OF 12 (75.0%)

Statistic	Value	Significance
Gamma	-.70927	

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